TRANSIT: PITTSBURGH'S MULTI-MODAL APPROACH

November 9, 1970

RAILWAY AGE

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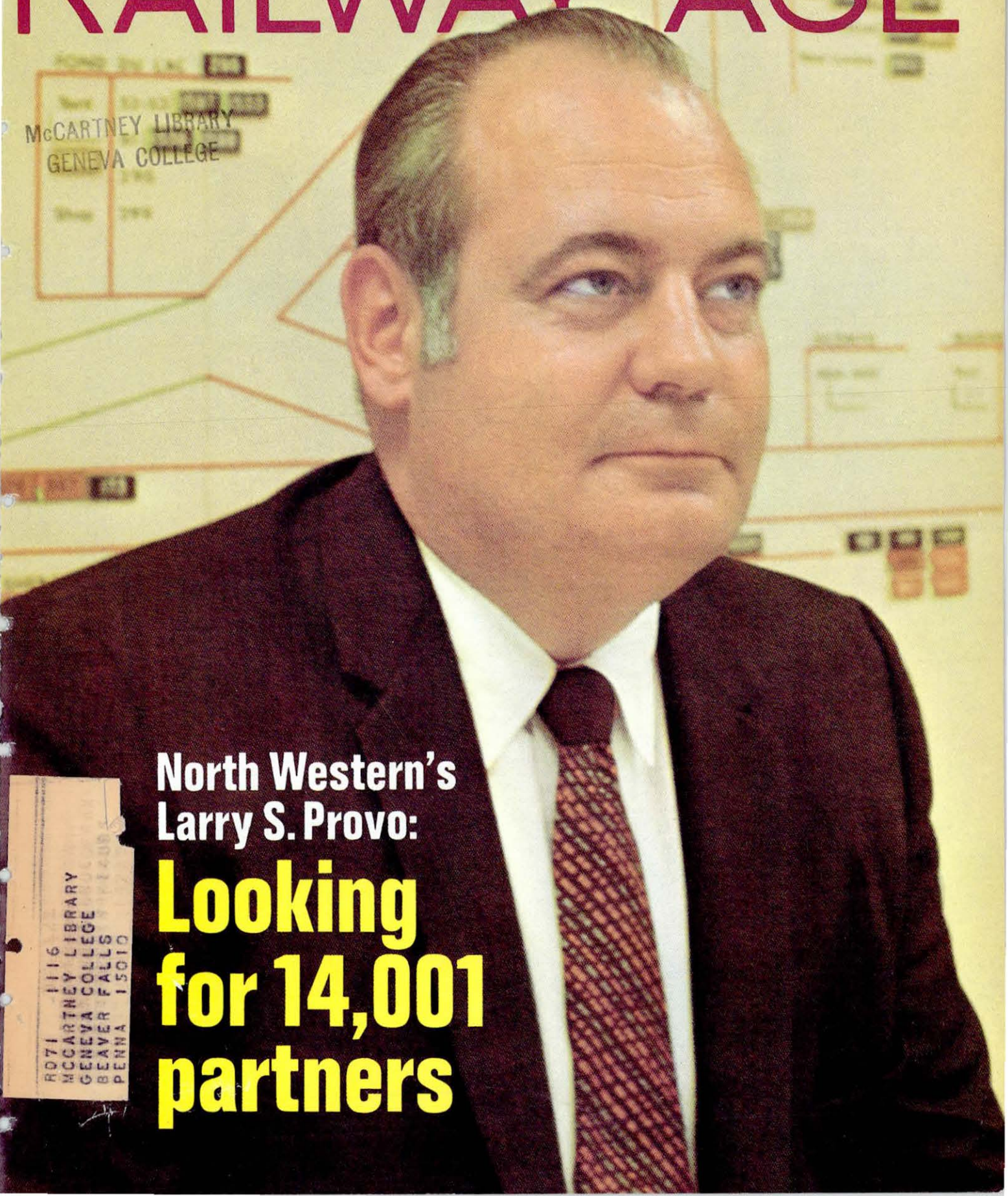

North Western's Larry S. Provo:

Looking for 14,001 partners

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Trailmobile by Pullman

INCORPORATED

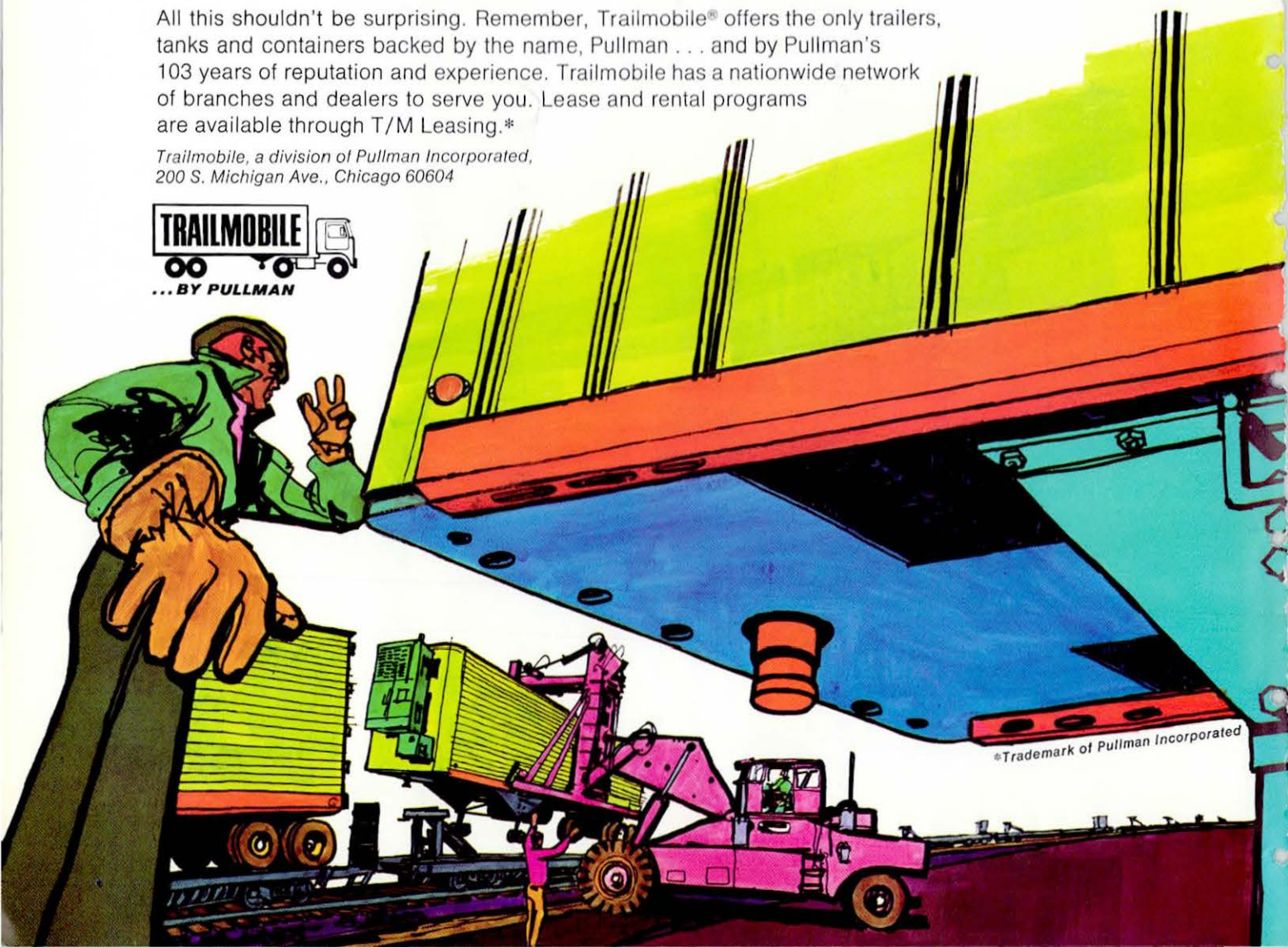
KING OF THE KINGPINS! Look where the action is. The kingpin design for the Trailmobile piggybacks is different from circular-based types. Trailmobile builds it as a one-piece, high-strength steel forging with a rectangular top. This provides secure welding attachment. In tests, this pin has handled 150 tons of horizontal loading.

Two-fisted engineering of this kind runs through every component. Full length wrap-around lift pads protect the outer rail and side posts. The nose is strengthened by 6 steel posts. These reach full height and are welded at the base to the front crossmember structure.

All this shouldn't be surprising. Remember, Trailmobile® offers the only trailers, tanks and containers backed by the name, Pullman . . . and by Pullman's 103 years of reputation and experience. Trailmobile has a nationwide network of branches and dealers to serve you. Lease and rental programs are available through T/M Leasing.*

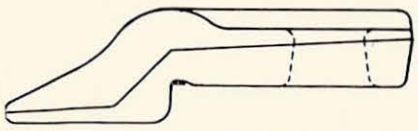
Trailmobile, a division of Pullman Incorporated,
200 S. Michigan Ave., Chicago 60604

TRAILMOBILE ...BY PULLMAN

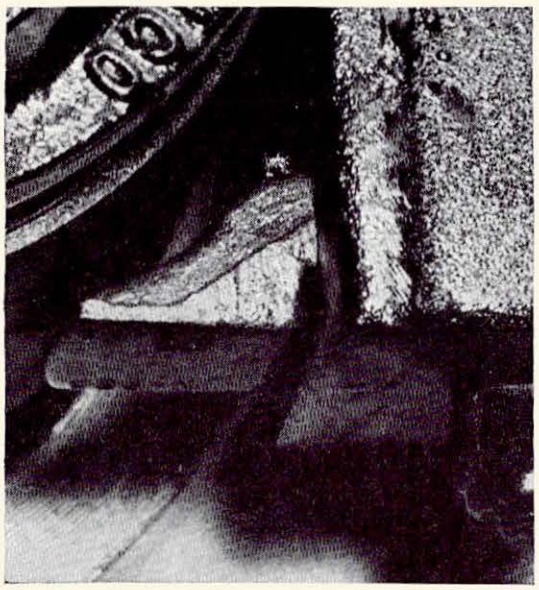


*Trademark of Pullman Incorporated

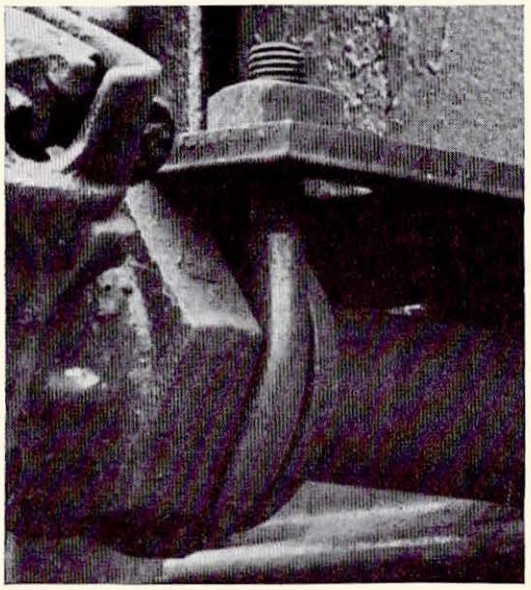
"specials" to others are standards to us

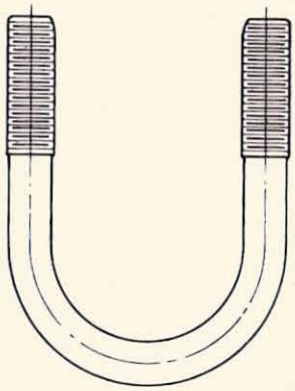


. . . narrow-pedestal, side-frame key



. . . angle-cock U-bolt





Bethlehem is set up to make fast delivery of side-frame keys, angle-cock U-bolts, and many other "special" fasteners used by railroads: watertight bolts . . . brake pins . . . timber drive spikes . . . tie dowels . . . tie-plate screws . . . "twisted" track spikes. In fact, many of these "specials" are available right from stock for immediate shipment.

Huge stocks on standards, too. Track bolts . . . track spikes . . . frog bolts . . . switch bolts . . . rivets . . . high-strength structural bolts . . . roof and rock bolts. All sizes and types. Swift, reliable service. One dependable source. Try us for your next order. Bethlehem Steel Corporation, Bethlehem, PA 18016

BETHLEHEM STEEL

Let bearing experts remanufacture your bearings.
It's not a do-it-yourself proposition. Brenco pioneered remanufacturing, has five conveniently located plants, is the only company that remanufactures *all* types of freight car roller bearings. And all are given a new bearing guarantee. There couldn't be a simpler way for railroads to reduce inventory and capital investment!

BRENCO Bearing Service, Incorporated
Petersburg, Virginia

BRENCO

RAILWAY AGE

November 9, 1970 • Vol. 169 No. 9

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supporting
ASTRO

Inside

LUTHER MILLER

C&NW'S EARLYBIRDS

On most mornings at 8 o'clock, Associate Editor Bob Bartley is aboard an Illinois Central commuter train en route from his Park Forest, Ill., home to our Chicago Loop offices. But a recent Tuesday 8 a.m. found Bob in an operating-department conference room at North Western Station—along with half a hundred Chicago & North Western officers for whom these "sunrise services" are an every-day (though rarely routine) affair.

At these meetings, which are chaired by President Larry S. Provo when he is in town, the state-of-the-railroad is examined in detail. The walls are lined with trend-line and bar charts that are up to the minute. There is a general airing of whatever problems have arisen in the preceding 24 hours; they can range all the way from a derailment to a report that a competitive road is about to introduce a new piggyback plan.

C&NW's earlybird get-togethers these days take on an added meaning for those present—because if all goes well, C&NW's employees may soon be C&NW's owners.

Bob's own (wide-awake) summation of the meeting he sat in on: "It's a helluva way to run a railroad. A helluva good way." He tells why in the story beginning on p. 26.

LOOK WHO'S BACKING RAIL TRANSIT

There are a number of excellent transit ads in this issue, and we commend them to all readers. But there's one transit ad that does not appear here, because it is beamed at quite a different audience.

Occupying prime space in a recent issue of The New York Times, this ad appeared under the heading: "America has the world's best highways. And the world's worst transit."

The ad itself begins: "In recent years, the U.S. has developed a really superb highway system. . . .

"But the highway construction boom has been accompanied by a mass transit bust. Train and bus travel in this country, with few execptions, is decrepit. . . ."

Not who puts out advertising like this? A transit hardware manufacturer? A transit lobbying group? A bitter foe of the "concrete, rubber and oil lobby"? Not at all.

This ad was signed and paid for by an oil company—Mobil. The punch lines were these:

"While Mobil sells fuels and lubricants, we don't believe the gasoline consumed by a car idling in a traffic jam (carrying a single passenger, probably) is the best possible use of America's limited petroleum resources. Our products ought to help more people get where they want to go.

"To us, that means a green light for mass transit . . . soon."

The transit and highway lobby interests have been fighting for far too long. Mobil has poured oil on troubled waters.

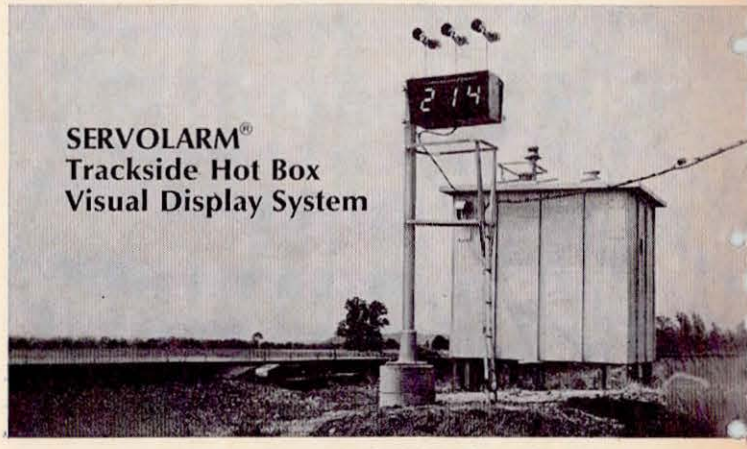
"Never you mind 'bout that new Servo display system you're gettin' next month—right now, start walkin' and don't stop till you find the hot box!"

EVEN without the guns pointed at him, our railroad friend's task of "walking the train" to find a hot journal box was not an enviable one. It certainly would have been simpler and quicker if he did have our new SERVOLARM® Trackside Hot Box Visual Display System.

Designed to operate with a standard SERVOSAFE® Hot Box Detector System, the SERVOLARM visually signals the presence of a hot journal box and also pinpoints its location by means of a digital readout axle count. SERVOLARM helps to eliminate train stops and crew delays. It simplifies and speeds up the entire hot box location procedure by directly notifying the crew via a trackside display board.

SERVOLARM can be quickly and easily installed with a minimum of construction equipment and labor, while eliminating long-distance wiring and extensive communication equipment costs. Compared to other, more complex methods of communication, SERVOLARM offers greater reliability and reduced maintenance.

Are you tired of looking for hot boxes the hard way? Take a look at SERVOLARM—just ask for Tech Data Publication 2013.



Bi-directional display board presents digital readout, showing axle count location of hot journal box. If no hot boxes are detected, display board reads "000". Flashing signal lamps on top indicate presence of hot box.

SERVO SYSTEM SERVICE—Servo Corporation of America backs up its railroad products with dependable support and assistance—site survey, application engineering, detailed proposal, installation checkout, plus field service and personnel training.

servo corporation of america

servo

railroad products division
111 new south road
hicksville, n.y. 11802
516-938-9700

MEMBER RPI

Circle 4 on coupon page 63

RAILWAY AGE

NOVEMBER 9, 1970

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Short and Significant

EQUIPMENT

SOUTHERN WILL CONTINUE BIG CAPITAL PROGRAM

A big money-maker (see page 11), the Southern Railway is also a big capital spender—and it has no plans to cut back. Southern is investing $120 million this year in new freight cars, locomotives and other capital improvements. Meeting with New York security analysts, Southern President W. Graham Claytor, Jr., said the road's 1971 capital budget, while not yet finalized, would be of "the same magnitude."

FREIGHT-CAR BACKLOG STILL SHRINKING . . .

The backlog of new freight cars on order and undelivered dropped to 21,672 on Oct. 1, compared with 25,782 on Sept. 1 and 45,133 on Oct. 1, 1969. Only 2,073 new cars were ordered in September, compared with 4,504 in September 1969. (Details on page 65.) There is some evidence that the freight-car market may have improved during October. Pullman President Samuel B. Casey, Jr., confirming in an Oct. 21 statement that Pullman-Standard's own backlog had dropped, added that "recent inquiries and order activity indicate that this may be a relatively short-term trend."

. . . BUT THE PASSENGER-CAR BUSINESS BOOMS

While freight-car orders are in the doldrums, the same can hardly be said for the passenger-car side of the railroad and rail-transit business. New York's Metropolitan Transportation Authority discloses that it has budgeted $122 million for 520 new 75-ft, air-conditioned cars to be ordered in 1971. They will be similar to 352 cars now being built by GSI's St. Louis Car Division. Meanwhile, the States of New York and Connecticut signed a $59-million contract with General Electric Oct. 29 for 144 cars to be used in New Haven commuter service (see page 11). General Electric also has an order from the State of New York for 80 cars to be used on Penn Central's Hudson and Harlem Divisions. These will be similar to the 620 Metropolitan Cars ordered by New York from the Budd Co. for use on the Long Island (over 400 have been delivered; the remainder are due in 1971). And Pullman-Standard, low bidder on up to 144 cars for the Southeastern Pennsylvania Transportation Authority (plus an additional 30-to-60 similar cars for the State of New Jersey), is awaiting a final decision from Philadelphia.

THE INDUSTRY

NTSB SEEKS IMPROVED BRAKING

The National Transportation Safety Board has recommended that FRA and rails begin a joint R&D effort to improve train braking systems. The Board said the engineman on an Illinois Central freight train applied full emergency brakes to avoid hitting a pedestrian at Glendora, Miss., on Sept. 11, 1969, with the result that 15 cars were derailed, three containing vinyl chloride burned or exploded, and 20,000 persons had to be evacuated. There were no fatalities. But, the Board said, brakes should be developed which are capable of shorter stopping distances and emergency applications should not produce internal collisions, instead developing full intended retardation force on each car in a train.

THE COMPETITION

TRUCKING: WORST SINCE 1945

Truckers are having their worst year since 1945, says the newly-elected chairman of American Trucking Associations, C. James McCormick. He said earnings of motor carriers will fall to $120 million this year from $240 million in 1969. McCormick also said a 14% wage and fringe benefit increase becoming effective Jan. 1 will force the industry to seek further rate increases next year. This year motor carriers through their 12 rate bureaus got increases of 10-12% on small shipments and of 6% on truck-load shipments. Second quarter revenue was down 4.5%.

AIRLINES: AT THE CRITICAL STAGE

The airlines, like everyone else in transportation, are feeling economically pinched. TWA Chairman Charles C. Tillinghast, Jr., told an Oct. 15 Civil Aeronautics Board hearing in Washington that the financial condition of TWA and the airlines industry as a whole has reached the critical stage when carriers are unable to obtain financing "to accommodate continuing growth and technological change." Tillinghast criticized CAB for failing to permit fare increases until airline profits had deteriorated to low levels, a plaint familiar to rail men.

Alco locomotives are still in good hands.

Take a look. There's a new address at the bottom of this ad. We've moved to Springfield, Ohio, to serve you better.

In Springfield we're in ideal position to draw on White resources to help keep Alco locomotives on the road. Running profitably.

Our Alco Products Service Division is fully organized, staffed, and equipped to back Alco equipment. Our three warehouses are loaded with parts ready for fast shipment.

Our people are ready, too. With parts, technical, and service recommendations to see that you receive continued good performance from any Alco product.

If you haven't already heard about our Care Program for your Alco locomotives, it's time you did. Write us at Alco Products Service Division, White Industrial Power, Inc., P.O. Box 5000, 1401 Sheridan Avenue, Springfield, Ohio 45501.

ALCO

Alco Products Service Division

White Industrial Power, Inc., Subsidiary of White Motor Corporation

Put Stanray components where the stress is, and lengthen box car life

X-Panel roof

Two of the greatest stresses a box car roof is subject to is twisting and racking. The X-panel roof is designed to provide maximum resistance to these stresses at minimum cost. Standard's new roof has panels 61½" wide instead of the normal 41", which result in approximately 33% fewer seam caps. It also means less chance of leakage.

Corrugated ends

Standard's Corrugated Ends have a resilient construction that produces spring-like action under impact, and a strength that is greater than other designs using the same thickness of metal.

Coupler Operating Devices

Standard can furnish a Coupler Operating Device to suit any coupler travel from normal draft gear conditions to cushioned underframes with as much as 60" travel. At the same time, Standard furnishes a Coupler Operating Device to suit any striker opening required for the custom underframe specified.

STANDARD RAILWAY EQUIPMENT
division of STANRAY CORPORATION
Chicago, Illinois • Hammond, Indiana

RAILWAY AGE NEWS

Nine-month's earnings: Southern sets its usual fast pace

For the Southern Railway, trend-bucking has become a habit. The latest batch of railroad earnings statements shows that things haven't changed.

In a period of generally declining earnings, not only for rails but for all U.S. industry, Southern has reported third-quarter earnings of $15.2 million, up from $10.2 million in third-quarter 1969; and nine-months earnings of $42.9 million, compared with $33.5 million in the 1969 period.

Announcing these figures to New York financial analysts, Southern President W. Graham Claytor, Jr., was careful to say that they should not be construed as evidence that all is well with the railroad industry. He said that even Southern's rate of return is "dangerously inadequate, whether as measured by accepted earnings standards for other industry, or by Southern's foreseeable needs."

Among other bullish reports was that of Union Pacific, which reported third-quarter net of $20.5 million, nearly even with third-quarter 1969's $20.6 million; and nine months income of $52.2 million, compared with $54.1 million in 1969.

A sampling of other net-income reports:

Southern Pacific—$16.7 million for third-quarter '70, down from $23 million in '69; $59.9 million for nine months of '70 compared with $71.4 million in the '69 period.

Norfolk & Western—$16.6 million in third-quarter '70, against $16.9 million in third-quarter '69; $50.4 million for nine months of '70, down from $56.2 million in '69. (Consolidated nine-months net for the N&W system, including Dereco, Inc., and its wholly-owned subsidiaries, Erie Lackawanna and Delaware & Hudson, was $45.1 million this year, compared with $66.3 million a year ago.)

Rock Island—net loss of $5.5 million for third-quarter '70, compared with a loss of $3.5 million for third-quarter '69; for nine months, a loss of $13.6 million this year, against a loss of $8.8 million in 1969.

Milwaukee Road—net loss of $3 million for third-quarter '70, compared with a profit of $2 million last year; for nine months, a loss of $12.8 million compared with a loss of $6.6 million in '69. (Land and timber sales helped improve the picture last year.)

Chicago & Eastern Illinois—for third-quarter '70, consolidated net income of $329,000, compared with a net loss of $1.1 million in third-quarter '69; for nine months, net income of $117,000 in '70.

Frisco—for third quarter '70 net income of $2.7 million, up from $2.2 million a year ago; for nine months, net income in '70 of $9.4 million compared with $9.5 million in the corresponding '69.

Soo Line—for nine months of '70, consolidated net income after a prior period charge, $4 million; up from $3.5 million in '69.

SP's Biaggini sees "sharp recovery"

"We expect a fairly sharp recovery in our traffic levels when the auto strike is settled," B. F. Biaggini, president and chief executive officer of Southern Pacific, told the Transportation Securities Club of Chicago. He blamed the General Motors strike, other strikes in SP territory, plus rising costs and a "generally flat" economy, for the 42-cents-a-share decline in nine-month net income when compared with the like period last year.

The long-term outlook, however, remains very favorable, Biaggini said. He cited projected growths in population in SP territory—1.5% annually through 1976—and in constant dollars—4.7% annually to 1986—as reasons for optimism. "We're planning well ahead to make sure our transportation system can handle this added business efficiently and profitably," SP'S president declared.

More than $140 million in new equipment is being delivered to Southern Pacific this year, he said, including 5,661 freight-train cars and 112 new diesel-electric locomotives.

New Haven takeover set for Jan. 1

The contracts have been signed—and the States of New York and Connecticut will assume responsibilities for commuter operations of the Penn Central's New Haven Division on Jan. 1, 1971. A few days after the signing a $59-million contract was awarded to General Electric for 144 new cars.

Present at the New York signing (see photo) were State Senator Anthony B. Gioffre, Gov. Nelson Rockefeller, Congressman Ogden Reid, Dr. William J. Ronan (chairman of the Metropolitan Transportation Authority), and Penn Central President William H. Moore. A simultaneous ceremony was held in the office of the Connecticut Governor.

Bryce W. Wyman, vice president and general manager of GE's Transportation Systems Division, said the new m-u cars will be assembled at Erie, Pa. "GE thus becomes the first totally integrated manufacturer with the complete systems responsibility for the entire car," said Wyman.

NEWS

Many applicants ready as Nixon signs transit aid bill

The ink was hardly dry on President Nixon's signature approving the 1970 Mass Transportation Act, that landmark measure assuring cities of Federal money for transit projects as much as five years in advance, but the early bird applicants had already gathered.

With the new law providing $3.1 billion in Federal matching grants by 1975—about four times as much money as Congress has appropriated in the past five years ($725 million)—those cities with existing or under construction rapid systems prudently had prepared their applications ahead of the law's actual passage and Presidential signature.

At the bill-signing ceremony in the White House Cabinet Room, on Oct. 15, Urban Mass Transportation Administration spokesmen let it be known that UMTA has already received $2 billion of applications. UMTA hopes to commit $800 million by June 30, 1971, the end of this fiscal year.

Among those projects likely to get help first are:

—Chicago Transit Authority: $400 million to replace its Loop Elevated with underground subway facilities.

—Boston's Massachusetts Bay Transportation Authority: $38 million to extend its South Shore line.

—Pittsburgh's Port Authority of Allegheny County: $113 million for a 10-mile rapid transit line from downtown to the South Hills suburbs.

—San Francisco's Bay Area Rapid Transit System: $20 million for equipment.

Plus new commuter cars or upgraded and modernized stations in Philadelphia, Cleveland, and New York, the latter of which alone submitted a massive request for $1 billion in aid. BART also expects to receive additional aid.

It was a pleased President Nixon who signed into law the transit measure—pleased because the Administration feels it is right on track with its transportation legislatitve program. Mr. Nixon praised DOT Secretary John A. Volpe for guiding the new law through Congress, but noted that bipartisan support for the bill helped.

"Transportation is not a partisan problem," the President said, predicting that "we are going to see a significant breakthrough in mass transportation."

AT WHITE HOUSE for signing of the transit-aid bill: Front row, l to r, RPI President Nils A. Lennartson, Senator Harrison Williams, Senator Robert Griffin, DOT Secretary John Volpe, Under Secretary James Beggs, UMTA Administrator Carlos Villarreal.

Costs of renovating, expanding, or constructing new rapid transit systems are expected to total $34 billion by 1980, say experts. Under the new law, Congress in a preamble set a 12-year goal of $10 billion in Federal aid. With $5 billion in state and local aid, this makes for a promised total of $15 billion in governmental expenditure for rapid transit systems, plus $2.5 billion for the Washington, D.C. Metro system, which is funded under a different Federal appropriation.

This is why transit men are hailing the new law with such tremendous enthusiasm: it is in effect a charter and mandate for a rapid transit boom of unprecedented dimensions.

The law's heart is a financial mechanism by which UMTA can obligate funds without waiting for Congressional appropriations. This enables localities to start the ball rolling for bond issues and state aid in the sure and certain knowledge that Federal aid will be forthcoming.

The actual appropriations follow at a slower rate, $80 million this year rising to an aggregate $1.86 billion by mid-1975 and $3.1 billion thereafter. The DOT Secretary returns to Congress at two-year intervals until the full $10 billion limit is reached. Moreover, most observers don't regard the $10 billion as a hard and fast maximum, noting that Congress is bound to raise the obligational authority under the pressures of inflation and urban need.

Computer application score gets better

What's happening in railroad application of computer-related programs? The AAR Data Systzms Division annual meeting got this report:

—ACI labels have been applied to about 85% of the interchange freight-car fleet. More than 120 scanners have been installed. An AAR-sponsored accuracy-check project is beginning.

—The Universal Machine Language Equipment Register (UMLER) file of freight cars is close to 80% complete. The file on railroad-owned equipment is better than 85% complete, but only about 30% of private-line cars are completed in the file.

—On the Tele-Rail Automated Information Network (TRAIN), the AAR computer is handling about four million records per month from 64 railroads. Junction slips are being produced. Twelve railroads are reporting no-bill and over-bill information, and the match is good.

—Use of the Standard Point Location Code will be mandatory in 1972.

Incentive given to private ownership

Cleveland Electric Illuminating has started to receive coal in the first of 300 aluminum gondola cars being constructed by, and leased from, Greenville Steel Car. The $6 million lease is expected to produce economies in the Ohio utility's fuel costs though lower freight rates. The majority of the 108-ton cars are to be used in two 119-car unit trains which Penn Central will handle from southeastern Ohio to the Cleveland area.

The acquisition of privately owned cars for coal service was given a boost on Oct. 8 when ICC ordered railroads to make non-railroad-owned hopper cars available for coal shipments when their owners ask for them.

Since 1923 such cars have been considered as part of a pool of all hopper cars and were allocated to coal mines by rails on a basis pro-rated to reflect the specific output of each mine. As a consequence, mines could be using more or fewer cars than it actually owned. Utilities owning cars received cars on the same basis.

The ICC ordered stipulated, however, that rails would not have to return any privately-owned hopper cars unless loaded in unit trains of at least 2500 tons. Meanwhile, in Washington, the National Coal Association said the coal supply crisis was over. It accused some electric utilities of crying "crisis" in order to "beat down" the price of coal.

Rohr, German firm sign agreement

Rohr Corporation, and Waggonfabrik Uerdingen A. G. (Duwag) of Dusseldorf, West Germany, will join forces in bidding for the 78-car San Francisco Municipal Streetcar System order, estimated to involve some $20 million. The agreement opens the way for use of Duwag-designed components in the electrically powered, articulated vehicles which Rohr is proposing. Duwag is a leading European manufacturer of rail vehicles and components.

Banker will chair TAA Institute

Donald M. Graham, chairman of the board of Chicago's Continental Illinois National Bank and Trust Co., will be general chairman of the Transportation Association of America's 1971 National Transportation Institute. The sessions will be held Feb. 3-4 at the Conrad Hilton Hotel in Chicago.

"Transportation Moves to Move America" will be the over-riding theme of the Institute, with specific sessions devoted to "Moving People in the Seventies," "Moving Freight in the Seventies," and "Moving Ahead with Transport Technology."

Age limit on cars not hurting TU

AAR interchange regulations requiring retirement of cars over 50 years of age will have "no significant effect" on operating results of Trans Union Corp., according to J. W. Van Gorkom, president. While the rule will accelerate retirement of several thousand old tank cars over the next five years, subsidiary Union Tank Car will simultaneously realize sizable reductions in maintenance expense.

Over the past 15 years, UT has replaced 25,000 cars. Leasing revenues come primarily from the newer fleet, most of which is made up of jumbo cars that each replace several of the older units.

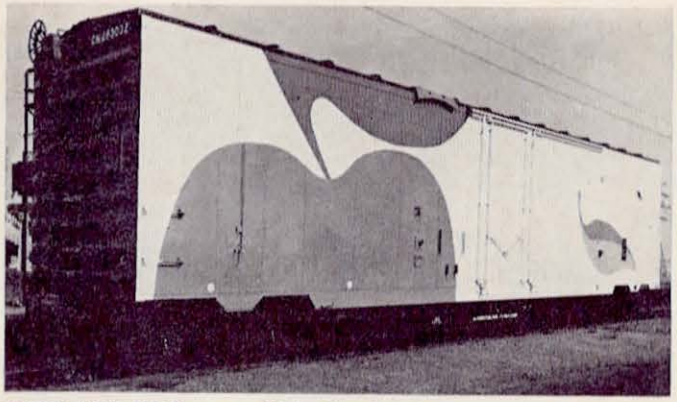
Santa Fe slug hits jackpot

Slugs may make money for Santa Fe. A locomotive concept used by other roads to enhance the tractive effort of slow-speed yard locomotives is now being appraised by Santa Fe at its new computerized Argentine freight yard at Kansas City, Kan. The ballasted six-motor unit without diesel engine is connected to a companion, a conventional six-motor 2400-hp switching locomotive. The result is doubled tractive effort without wheel slip at low switching speeds.

"The slug cost less than 10% of the cost of the 2400-hp diesel-electric unit it replaced," reports Larry Cena, vice president-operations. "We may build more of these units for use at other points on the system if the first works satisfactorily as we believe it will." Before getting its trucks and traction motors reconditioned and its body cut down and ballasted, the slug was a standard locomotive unit.

General Electric recently announced application of "slug" concept to road freight service.

NEWS



APPLE AND LEAF are motif for insulated car.

NEWSPRINT SERVICE is emphasized on box car.

"Billboard" cars help tell the CN story

To emphasize the continuing importance of railroads as prime movers of freight, the Canadian National has turned four of its freight cars into "billboards on wheels." Each of the cars—an insulated box, a plain box, a mechanical reefer and a covered hopper—has had one side covered with large graphic illustrations to show what it carries. The opposite side of each car remains in its standard design with conventional reporting marks.

After leaving CN's Point St. Charles shops in Montreal, the cars were filmed in a variety of situations for a new series of television commercials. Then they went to work on the system.

A spokesman says the idea is "to make the public more aware of the ever expanding role of freight transportaion in the life of all Canadians and to emphasize the quality and diversity of CN freight services."

The insulated box has a colorful painted sketch of an apple, complete with green leaves, representing the railway's fresh fruit and produce traffic. A 50-ft cushioned underframe car used for hauling newsprint is covered with enlargements of the mastheads of a score of newspaper. The letters in each masthead are two feet high. The refrigerator car has a multi-colored beef cutting pattern painted on a white background. The hopper car is painted in several different colors, each with a printed chemical formula, suggesting the various bulk-commodity chemicals it is equipped to carry.

W. K. Smith raps rail management

Rails are run by the wrong people emphasizing the wrong things.

So says the man who turned down President Nixon's offer to become first permanent chairman of the ICC.

He is William K. Smith, vice president and director of transportation of General Mills, Minneapolis, Minn.

"Railroads are directed by executives whose education, experience, and objectives are primarily the management of assets," Smith told the ICC in comments on the rail request for a general freight rate increase of 15% in the East and West and 6% in the South.

"Financial people, legal people, and engineering people in that order are the dominant 'disciplines' among railroad boards and presidents' executive committees," Smith noted.

"They are not directed by people whose education, experience, and objectives are customer patronage—marketing. And they need not be," Smith continued, "were they to give sufficient support to marketing people. But within the railroads, as an industry, marketing does not have top management support," Smith said.

The General Mills executive said there were several first class rails today but there was an industry-wide need for a "reliable operating product."

He suggested that reliable handling of freight cars meant a "90-95% on-time" arrival, measured against "standard in-transit" times that permit a plus or minus 24 hours.

He also said the ICC should require rails to have a car utilization of one more revenue trip per month per car, to provide more freight cars designed and maintained to meet user needs, and to furnish empty freight cars within 24 hours after shipper-order in all but unique situations.

LIRR electrification: First in 40 years

Operation started Oct. 19 over the first major extension of electrification of the Long Island Railroad in 40 years. The 16 miles from Hicksville, N. Y., to Huntington involved installation of 166,000 feet of third rail, welded running rails, eleven new substations, high-level platforms and modernization of the signal system. Financing for the $69 million project came from the U.S. Department of Transportation and from New York State's Transportation Bond Issue. Governor Nelson Rockefeller, Chairman William J. Ronan of Metropolitan Transportation Authority (which operates LIRR) and LI President Walter Schlager, Jr., attended inaugural ceremonies. Rockefeller stressed that the improvement will cut travel time for 12,000 commuters and eliminate some changing of trains.

Du Pont's President says:

"If railroads are in trouble, we are in trouble, too..."

E. I. du Pont de Nemours & Co. ranks among the biggest single corporate customers of the railroads, shipping about 60,000 carloads a year. Addressing a company safety meeting in Chicago on Oct. 26, Du Pont President C. B. McCoy expressed concern over railroad safety—but he was even more concerned over railroad survival. Here are excerpts from his talk:

As everyone knows, the railroads are in trouble. Their costs are rising and the equipment of many railroads is badly in need of repair and modernization. The volume of rail traffic has been increasing, and this has accelerated the wear and tear on roadbeds.

This is not the problem of the railroad companies alone. If they are in trouble, we are in trouble, too. Each year we move by rail 6 million tons of raw materials and products in and out of our U.S. plants. Last year there were 44 major rail accidents involving 87 Du Pont rail cars. Most of the serious accidents were derailments.

It goes without saying that this is a safety problem, but it is a problem that cannot be solved in terms of safety alone. To make rail transit safer as well as more efficient, the railroads should spend $36 billion in the next 10 years on new plant and equipment. They do not have the money and there is no easy way for them to get it. This is a regulated industry expected to provide 20th century service in a competitive marketplace, but the railroads are governed by outdated laws.

On the safety side, some necessary steps are being taken. The railroads have been the only mode of transportation in the United States not subject to comprehensive Federal safety regulations. Senate Bill 1933 recently signed by President Nixon is an attempt to rectify this. Its objective is to promote safety in all areas of rail operation, to reduce accidents, and to reduce injuries and property damage caused by accidents involving the carriage of hazardous materials. We are firmly in support of this bill, and are pleased that it has moved through the present session of Congress.

We are also encouraged that Congress has created a private corporation to handle much of the passenger service. Directly or indirectly, this could release monies for improvements in roadbeds, and improve safety.

But the only way to promote safety in the full sense of the word is to bring the railroad industry back to economic health. While railroads need substantially more self-help, their survival calls for new approaches across the board, to provide new flexibility in raising capital, cutting costs, and making sense out of a rate structure that is chaotic. It calls for cooperative efforts involving the railroads, the companies that use their services, the legislative and executive branches of government, the labor unions. . .

We would be prepared to endorse an over-all national policy that states a clear objective of restoring this industry to competitive health. We must have imaginative Federal leadership to establish such a policy and make it work. This may well involve additional rate increases, and that would have an impact on our business; but we would be willing to support reasonable increases if the funds were earmarked for improvement of service and safety, and if the increases were part of an over-all revitalization plan. In our judgment this is the best route to follow, for the alternative—nationalization of the railroads—is more costly and less effective.

We admit frankly that better rail service would help our company, but we believe that the public interest also would be served. Certainly, no one stands to gain by allowing the situation to deteriorate further.

IC offers new plan to Iowa shippers

Illinois Central is telling Iowa grain shippers that IC is ready to put its money where its mouth is with a new guaranteed service on corn and soybeans moving to gulf ports in shippers' covered hopper cars. The new plan, called "Customer-Car-Train I," features a guaranteed transit time on trains of 50 cars or more between Iowa grain shipping points and five ports in Louisiana and Mississippi. If the trains fail to perform as scheduled, the IC is perpared to pay "a penalty of $25 per hour for late delivery of trains of 50 cars," says John W. Ingram, IC's vice president-marketing.

This tariff, which Ingram describes as "a service tariff rather than a rate tariff," seeks to improve car utilization in cases where shipper-owned or leased cars are used. Under the proposed plan, he adds, a shipper can cover the annual lease cost (about $2,400) of a 100-ton covered hopper car in such service in about five months. These leased cars earn mileage allowances.

If the ICC approves the tariff, the new plan could be ready for experimental service early next year. If it is successful it will "open an export market for grain into Iowa."

Fraud suspected in ICC Traffic Bureau

ICC says it has found possible criminal violations with respect to the handling of tariffs in its 225-man Bureau of Traffic. All new rates are filed with the Bureau, which then makes the initial recommendation to the ICC's Board of Suspension on whether to delay for as long as seven months the effective date of the rates pending an investigation. Evidence of fraud on the part of "five or six" individuals benefiting unspecified regulated carriers has been turned over to a U. S. attorney.

NEWS

Lines on Labor

GUS WELTY

IN THE WAKE OF A STRIKE . . .

Post-mortems aren't often done in a rail strike situation. But there may be some value in after-the-fact analysis—some value in knowing how the unions were elected officers and to want more control over what they do. the time they took action. C.L. Dennis has done this kind of analysis and circulated it among Brotherhood of Railway and Airline Clerks officers down to the local-lodge level—with the hope that "every member would become fully informed." It may be a shrewd move—especially in view of the reported tendencies of individual members to have less faith in their elected officers and to want more control over what they do.

THE "WHY" THE "HOW" AND THE "WHAT IF"

The strike autopsy by BRAC President Dennis is, of course, about the brief wage strike during September against Southern Pacific. Chesapeake & Ohio and Baltimore & Ohio. Why those three? Well, says Dennis, "almost any three would have done. These three did represent a broad geographic distribution, we had strong membership support . . . and we were dealing with essentially financially healthy carriers." Why did BRAC and the other participating unions obey a strike-ending restraining order—since they didn't agree with the logic of the order? Says Dennis: "Right or wrong, the court does have the right to bring a temporary halt to a strike." And there's this to consider: "If we were to violate this order, every member who picketed, every union officer from the local, district, system board, system division and grand lodge level is subject to fines and jail . . . . Further, the treasury of the International Union and each and every subordinate unit is subject to heavy fines and even possible seizure."

WHAT DID IT PROVE—AND WHAT COULD HAPPEN NEXT?

"We hit three roads," BRAC's President declares, "and we hit them hard. We taught the carriers that our members are ready, willing and able to bring them to their knees . . . . it takes a long time to call a railroad strike and, once called, it takes a long time to get people back to work, no matter how hard one works to comply with court orders. The railroads learned a costly lesson." Would BRAC (and the others) strike again? Yes, says Dennis: "Our objective is a good agreement, not a strike. However, I have not hesitated in the past to call a strike when it is essential and I do not intend to hesitate now." And who decides what is a "good agreement"? By Convention decision BRAC has no referendum provision; in the final analysis, agreement acceptance/rejection decisions will be made by the general chairmen, in session.

Do rails need new accounting methods?

The accounting methods railroads use and which are required by the ICC may be an overlooked factor materially contributing to rails' financial problems, suggests a Chicago certified public accountant.

Writing in the October issue of The Journal of Accountancy, CPA Philip I. Coleman says rail accounting is different from accounting practices followed by other industries in two important areas: (1) the assignment of income tax liabilities to appropriate periods and (2) accounting for properties.

Under general accounting rules, he writes, businesses currently reporting income that will not be taxable until a later period must also report currently the taxes that will be payable on such income. Not so for rails, he says.

Coleman says in 1968 the effect of this tax allocation, which is specified by the ICC, was that 21 major railroads reported earnings 23% higher than they would have been if conventional accounting methods had been used.

As for rail property accounting, it is "based on theoretical considerations which have long fallen out of favor, although they have remained within the bounds of generally accepted accounting principles," Coleman writes.

"The initial cost of track structure is capitalized. Therefore, no depreciation is taken and the asset is carried on the balance sheet at original cost so long as track is in use in that same location. This would provide the same results as standard accounting, if track structure lasted forever. However, it does not."

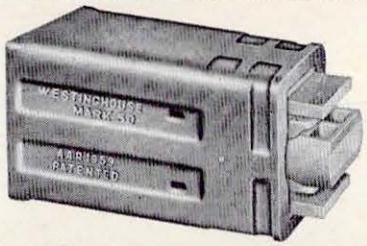
The results of this, believes Coleman, is that rail management's decisions on track improvements are marred.

If management makes the improvement, current earnings are penalized by having to charge off the entire cost in the year the improvement is made. If management does not make the improvement, the efficiency of future operations is penalized.

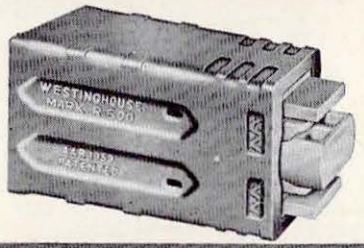
Because of inflation, continues Coleman, replacement trackage is almost certain to cost more than the original track. Yet because the track is still in the same place, it is carried on the railroad's balance sheet at the original cost without depreciation.

SMOOTH CONTACTS

MARK 50



MARK R-500



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MEMBER RPI

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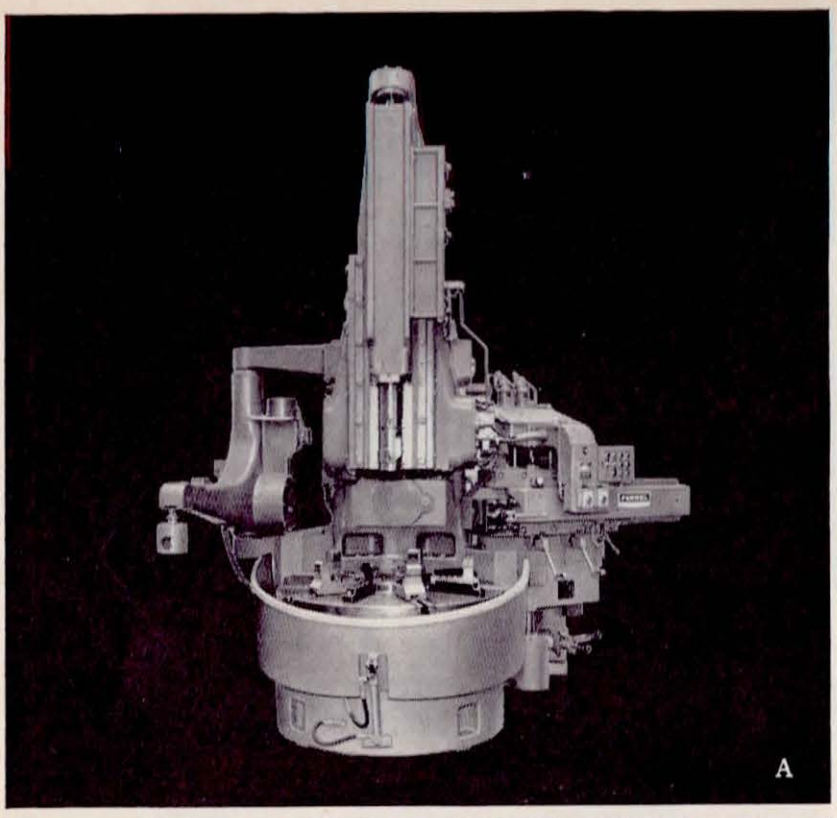

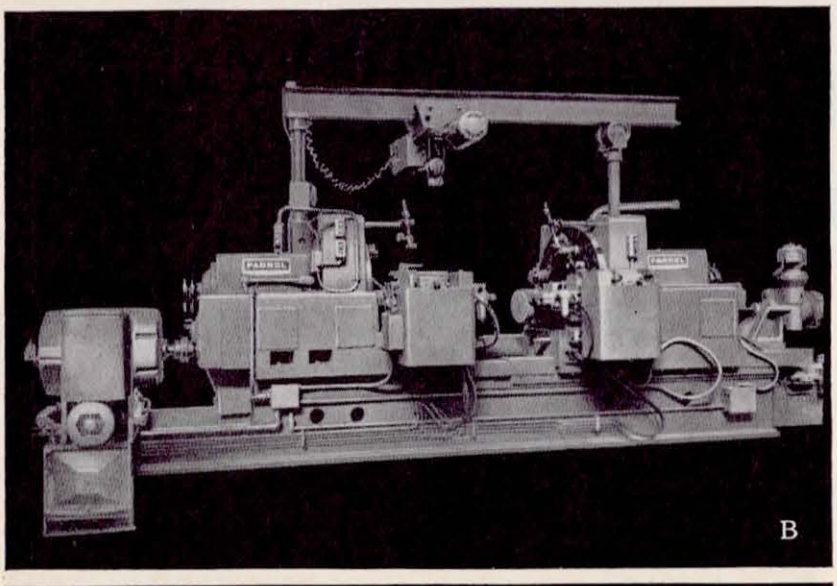

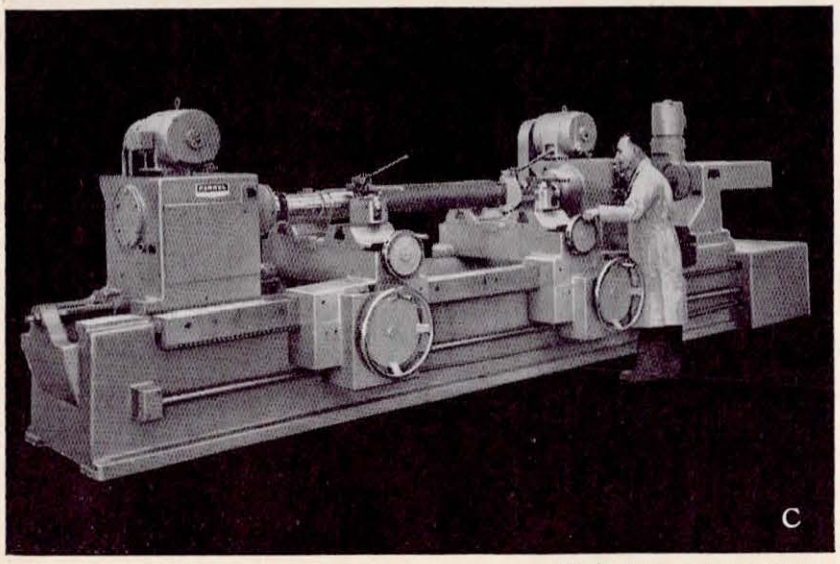

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renew more wheels and axles for less

Farrel railroad wheel shop equipment has proved to effect important savings in maintenance and manufacturing of wheels-and-axles. Farrel offers improved productivity without increasing manpower requirements.

FARREL DIESEL-WHEEL BORER (A) rough bores, finish-bores and chamfers in a continuous cycle. It will face and turn both sides of the hub and face the flange side of the wheel rim. Wheels are automatically centered and chucked. Boring is completely automatic and all work is performed quickly and accurately.

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FARREL DUAL-END DRIVE JOURNAL-TRUING AND AXLE LATHE (C) finish turns and burnishes new or used car or diesel axles. The equipment also finish turns and burnishes inside and outside journal of mounted wheel sets. In addition, it turns center portion, between wheel seats, of straight axles. Speeds are compatible to carbide tooling.

Most Farrel railroad shop equipment is available with semiautomatic or fully automatic loading and unloading devices and with transfer and measuring systems. "Sequencing" any of the machines with one or more of the others improves accuracy and minimizes the need for additional manpower.

For more complete information about the complete Farrel line of wheel-and-axle machinery, send for bulletin 1400-A today. Let a Farrel proposal be the standard against which you make your buying decision.

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You can be confident that Universal Non-Spin Hand Brakes will provide safe and positive braking.

Model No. 2250 has a top release lever and Model No. 7400-3 has a bottom release lever. These brakes feature immediate or gradual load release. The Model No. 2211 features gradual release only.

All internal parts subjected to wear are manufactured of forged steel. Each part is heat-treated for strength and toughness . . . Brakes will not release under vibration . . . Chain-winding capacity is provided to permit the use of a multiplying lever with sheave wheel. All brakes are certified to meet A. A. R. 1966 Specifications.

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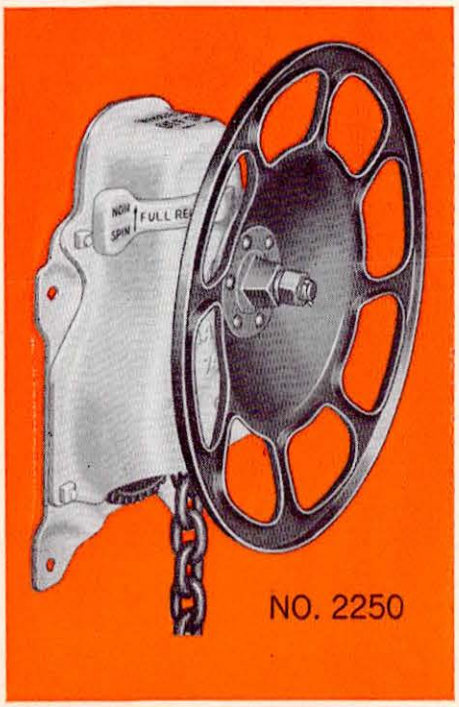
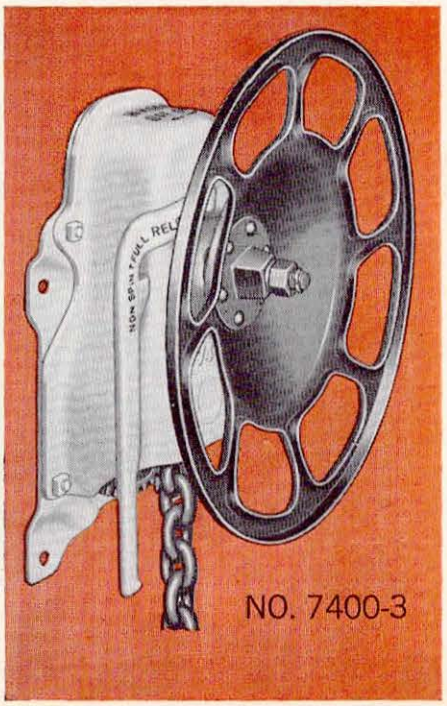
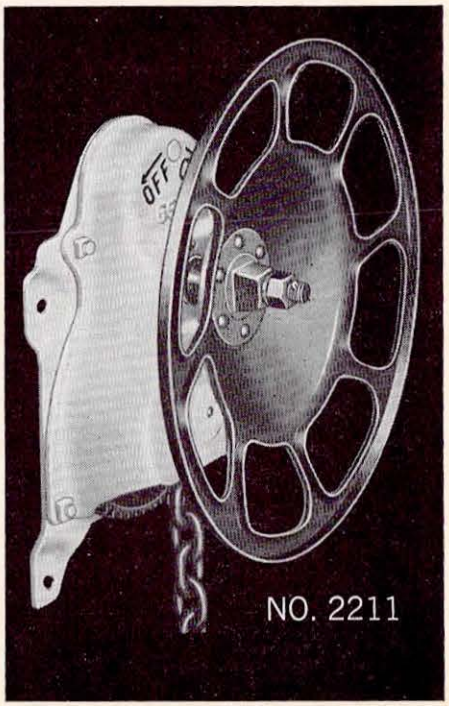






Circle 9 on coupon page 63

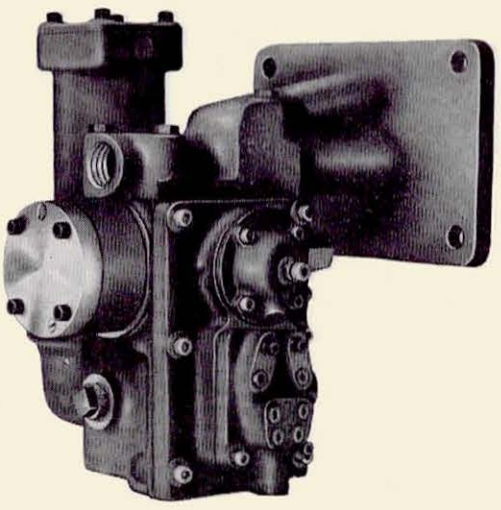
Suburban Passenger Service Rolls with...

PS-68

Built by New York Air Brake Company to suit Railroads who know what is needed.

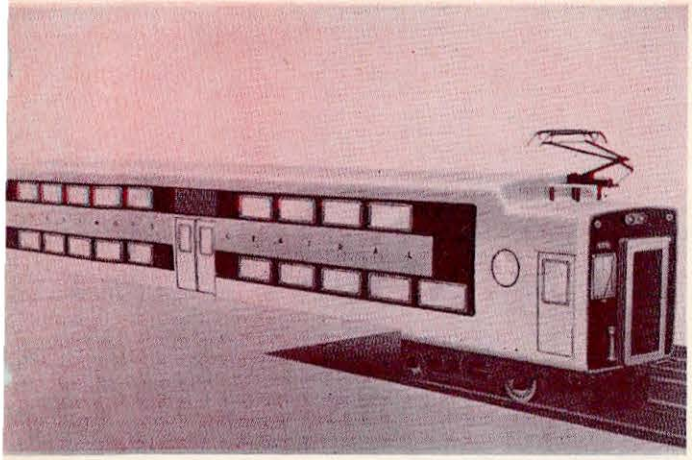
Dynamic Brake Blending Valve

Another development by NYAB...reads the brake call signal; measures the dynamic brake output and automatically adjusts the friction brake level to compensate.



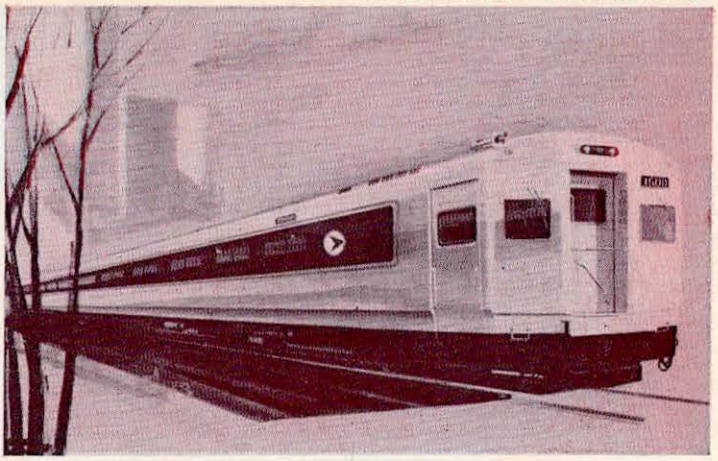
BLENDING VALVE

(Photo courtesy of St. Louis Car Co.)



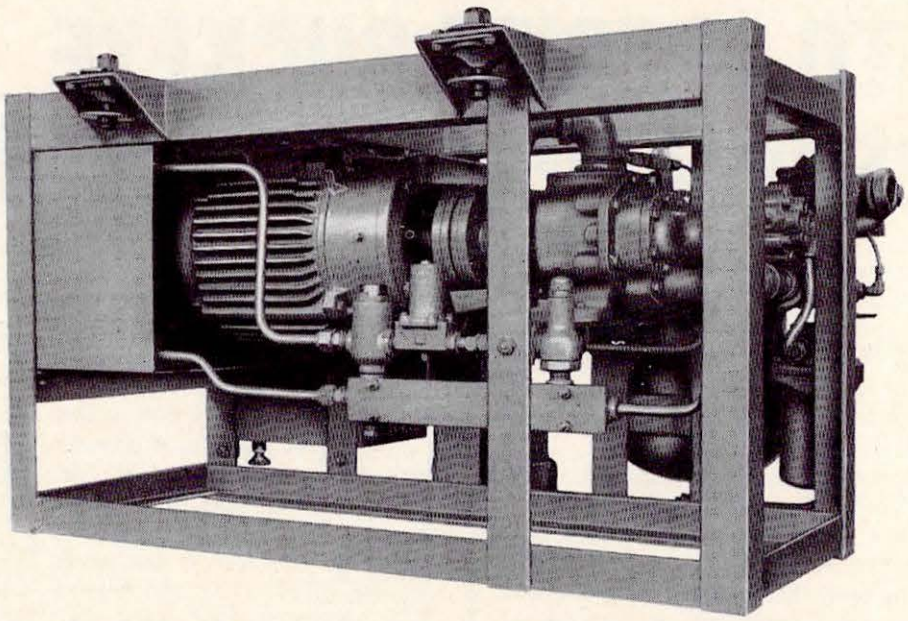
ILLINOIS CENTRAL—123 Self-Propelled Suburban Cars including Hydro Pneumatic Truck Brakes.

(Photo courtesy of Pullman Standard)



ERIE LACKAWANNA—for 105 new commuter cars for push/pull operation.

The PS-68 answers all the requirements for either self-propelled units or for push/pull suburban passenger service. It's versatile, responsive, fail-safe and full of surprising innovations. Railroads who understand the demanding braking requirements of commuter service are selecting PS-68.



The PS Compressor Unit is lighter and practically vibration free. It features a wet screw type air compressor which delivers clean, cool air. Maintenance is reduced as there are no "thrashing" reciprocating parts to wear.

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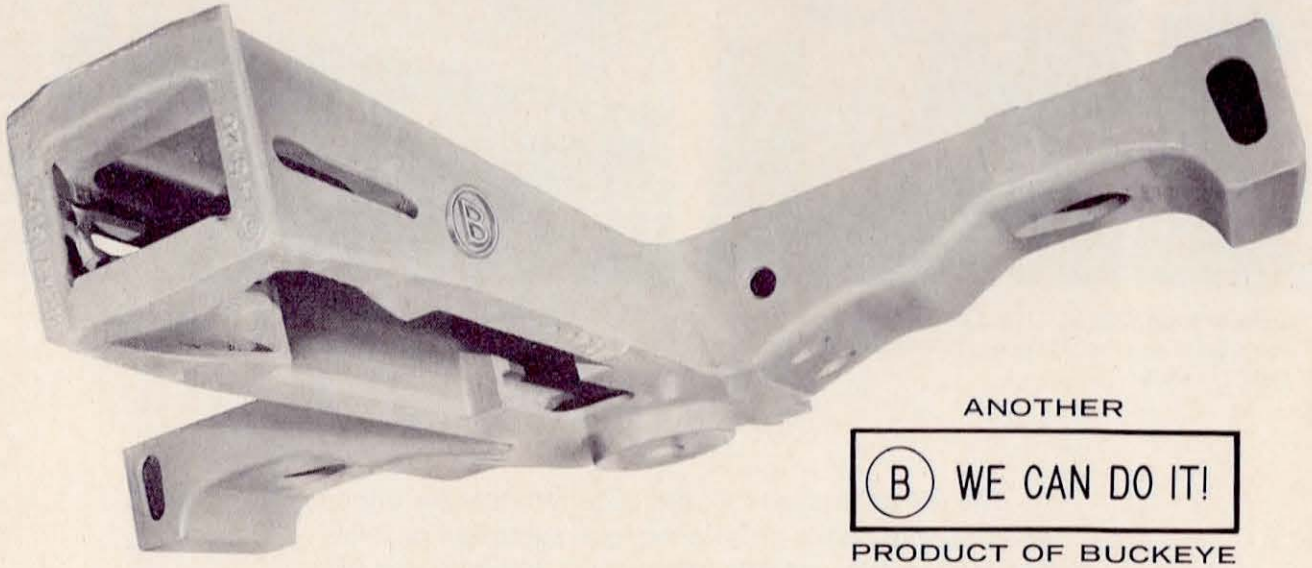

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Trouble-free service experience is still one of the best reasons to specify a product. The 7,000 Buckeye Unitized Underframe Ends put in service during the last four years on eight railroads are the kind of solid, proven reasons you want when you're looking for the best product for this kind of job.

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MEMBER RPI

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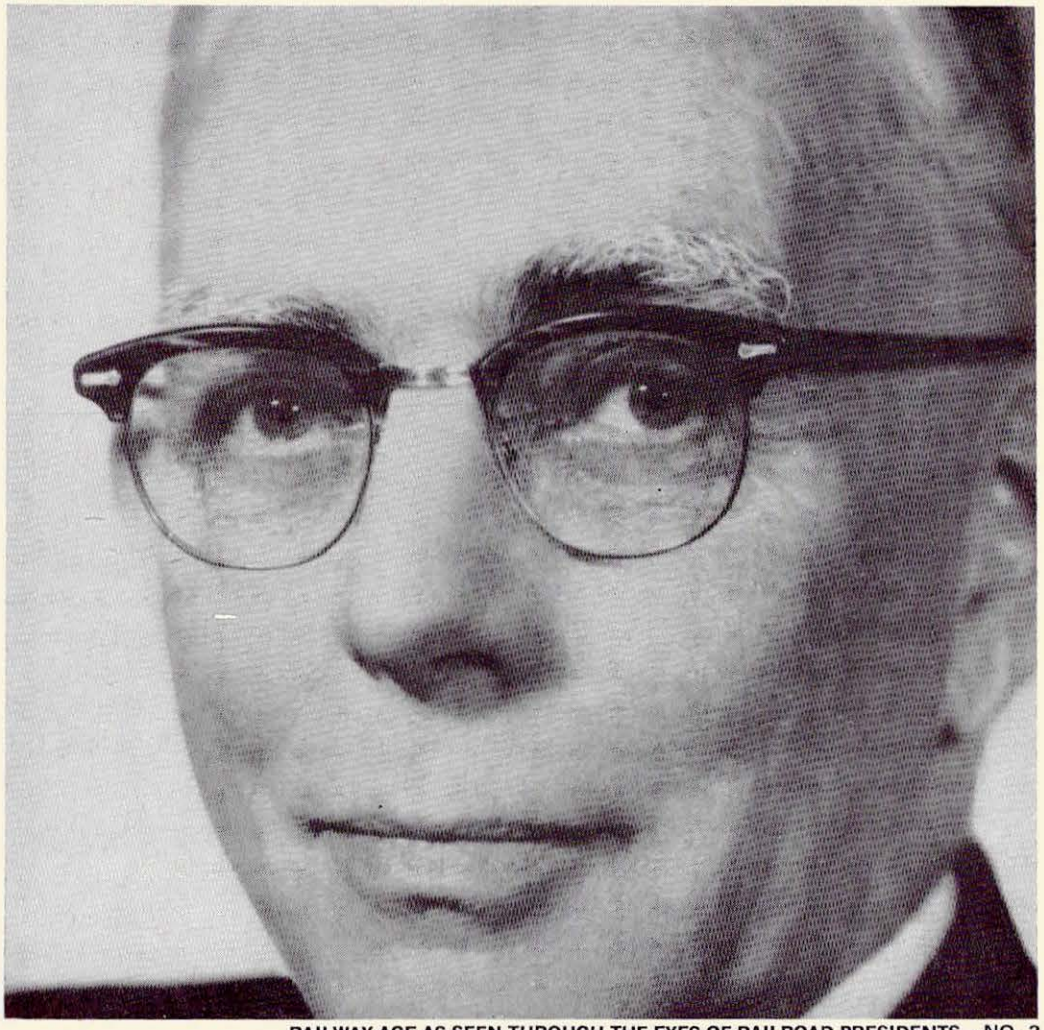
"Each copy has a 'required reading' routing slip"

I expect the members of my staff to be as fully informed on railroad matters as I try to be. So all of us read Railway Age, which provides much interesting as well as useful information. That is why each Department of the Long Island Railroad is provided with its own copy - and each copy has a "required reading" routing slip.

Walter L. Schlager, Jr.
President



RAILWAY AGE AS SEEN THROUGH THE EYES OF RAILROAD PRESIDENTS— NO. 2

The Long Island Rail Road

If I were running

The Commuter

...I'd do everything I could to keep the trains running on time. Among that everything, I'd include more automation, more electronics and more lightweight cars.

My brother-in-law lives in south Jersey, and rides the new Camden-Lindenwold line into Philadelphia. He says it's the closest thing to push-button railroading he's seen since he got his first Lionel back in '38. He says nobody in his block, not even the wives, ever drives downtown anymore, because the schedules are so convenient and the trains are so clean.

Speaking of cleanliness, I'd also like to see cleaner trains. I was in Chicago last week and rode one of the CTA's new stainless steel cars. If PATCO and CTA can put people on safe, clean, comfortable stainless steel trains, why can't this railroad?

What else? Oh yes, I'd make the timetables a little simpler and a little easier to read. The fine print and footnotes are okay for contracts, maybe, but not for timetables.

this railroad...

The Accountant

...I'd keep an eye on the little costs that snowball into big expenses.

For instance, do you have any idea how much it costs us to give a passenger car a bath? Or a new paint job? I'd get new stainless steel cars that don't show dirt and are so corrosion resistant that they never need paint.

Did you know that the price of power to roll an extra thousand pounds of car weight down the track adds up to hundreds of dollars over the lifetime of the car? So I'd do everything I could to trim the fat from my new rolling stock.

That's why I keep telling our management to get cars made out of nickel stainless steel. It's a real bargain. If I were running this railroad, I'd make it a stainless steel line.

INTERNATIONAL NICKEL

For more information on stainless steel passenger cars, write Department RA1170, The International Nickel Company, Inc., One New York Plaza, New York, New York 10004. In Canada, The International Nickel Company, Ltd., P.O. Box 44, Toronto-Dominion Centre, Toronto 111, Ontario.

Circle 12 on coupon page 63

TOMORROW'S RAILROADS IN ACTION

For too many railroads, in recent years, a truth-in-advertising slogan might read: "Survival is our most important accomplishment."

For too many roads, survival has been—and is, and has to be—the primary consideration. It's not exactly survival in the normal or dictionary sense—as has been most recently and most publicly proved by Penn Central. Railroads (with an occasional Rutland-type exception) don't just go out of business; reorganization law provides for a road's staying in business while trustees sort out the pieces. Railroad survival, for the most part, can be defined in the first instance as staying out of the kind of trouble that leads to the courts.

But, as New Haven, Boston & Maine, Penn Central have proved, this definition can't always be met. And, while the reorganization petitions have been filed with courts in the East, the problem isn't just eastern. Not when the red ink is, or has been, flowing liberally for such as Katy, Milwaukee Road, Rock Island, Western Pacific, Chicago & North Western.

Getting back to the black isn't easy—most especially in today's stagnant economy. Changes in management can be made, and some of them may help. Merger may offer an "out," with RI a prime example of this possibility. In some cases, conditions attached to somebody else's merger may help—with Milwaukee a prime case, in the conditions involved in Burlington Northern merger and in those which may be involved in the Louisville & Nashville/Monon consolidation.

The unique approach to railroading of tomorrow is the one which Chicago & North Western may provide—with sale of the railroad to its employees, as North Western Employees Transportation Corp. It may not work for C&NW, as it no doubt would not work for every road in trouble. But C&NW—or rather, NETCO—will give it a try. And so No. 11 in the Tomorrow's Railroads in Action series explores C&NW—what it has come to be, what it may become.

North Western's Larry Provo:

Looking for 14,001

If C&NW is to succeed as the first employee-owned railroad, the government will have to be a partner—in several ways.

By ROBERT D. BARTLEY,
Associate Editor

If everything goes well, in a few months Chicago & North Western's Larry S. Provo could be actively seeking out 14,000 partners in one of the most unusual business ventures to come along in quite a while. Through North Western Employees Transportation Corp. (NETCO), an employee group which he helped form, the 43-year-old president actually wants to buy the railroad he has been running for the past three-and-a-half years.

The partners Larry Provo wants to have join him are his employees—all 14,000 of them.

Although both NETCO and the road's current owner, Northwest Industries, have agreed on the sale terms, there's still another "partner" to be heard from before any title to the railroad can change hands. This, of course, is the government—in this case, the ICC—which now has the purchase agreement under study. And, as railroad managements everywhere have come to realize, governments often hold the key to success in many areas of the transportation business these days.

● **Reaction is favorable.** Until the ICC does render some kind of decision, any talk on the railroad about employee ownership must be strictly of an unofficial nature. "Groundswells," as Provo calls them, seem to indicate a generally favorable reaction. Meanwhile, as the ICC ponders the question of whether the first major employee-owned railroad should be allowed to be formed, employees along the system have ample opportunities to take a closer look at the property which they and they alone may be able to buy.

What, in fact, is this property known as the Chicago & North Western Railway which Provo and his 14,000 potential partners may be investing in? If a real estate dealer were listing it, he might describe it this way:

> **For sale:** One railroad. 11,300 miles of roadway, 48,000 freight cars, 280 double-dec suburban cars, 830 locomotives, plus other equipment. Located in friendly, 11-state neighborhood in the Midwest. Excellent view of Lake Michigan as well as the Mississippi and Missouri Rivers. Plenty of trees, lots of open farm country, outstanding recreational facilities nearby. Also, close to major shopping centers — Chicago, Twin Cities, Milwaukee, Omaha, Kansas City and St. Louis. Price: $19 million in cash payable over a 20-year span, plus assumption of a $401-million publicly held debt.

A security analyst, on the other hand, might regard the C&NW in a slightly different light. Most likely, he would see it as a marginal operation. Management has predicted it will operate in the black this year. Last year, however, it lost close to $15 million.

If the road should be given a physical check-up, it probably would be rated as being in pretty good condition. During the past decade, especially in its last half, the road invested heavily in new equipment. Capital spending averaged close to $40 million a year, with a peak of $68 million reached in 1968. Although this year's spending for equipment is down to around $17 million and next year's spending may not be much different, the car and locomotive fleets remain fairly healthy.

There are a lot of other ways to look upon this Chicago-based railroad. Some might compare it with a much-thwarted suitor because of its many attempts and failures to find a merger partner. Chicagoland commuters, even ones who are not customers, have come to regard

partners

North Western's suburban service as the finest around, a real standard of comfort. In recent years, shippers, too, have discovered that C&NW is very service-minded.

Among employees, the road is earning respect as an aggressive, yet fair, employer.

● **Effective teamwork.** To Provo, who used his intimate knowledge of finances, plus his 16 years of top railroading experience, as stepping stones to the road's presidency and who has pledged to invest the maximum allowed—$100,000—in the employee-owned business, the C&NW is "an effective organization that knows how to perform as a team." He feels that the people working on the railroad will make it work, no matter who owns it.

"No one man, no dozen men, no 300 men working out of Chicago can run this railroad. It takes 14,000 people performing as a solid team," adds Provo.

As the 14,000 employees know, business goes on as usual at the C&NW while the ICC studies the purchase pact. And, as they have come to realize, too, the C&NW's business, as viewed by Provo, is one that requires "complete dedication to providing good service."

● **"Sunrise services."** To get a jump on things, to get the day in the kind of shape needed to provide top service, personnel get an early start. "We're an 'early' railroad," says Provo. And he's not kidding, as one traffic manager of a major paper and products manufacturer discovered when he accepted an invitation to one of the road's daily management conferences. Because of the early hour of the meeting, the traffic manager dubbed it "sunrise services."

These early morning sessions have become management's key source of information about the current status of the railroad. Held in an Operating Department conference room whose walls are lined with up-to-the-minute charts showing the state of the railroad, they deal, for the most part, with what went wrong during the previous 24 hours. Top headquarters people—usually several vice presidents along with their assistants, department heads, key staff members and, if he is in town, Provo himself—are at these meetings.

A half-hour after it starts, a meeting is over and, as Provo points out, members of the road's management team can return to their departments and "go through the day knowing the current status of the railroad." These sessions break up at about the time most Chicago Loop offices and businesses are just awakening and when the bulk of the road's 45,000 commuters are passing through the stations on their way to work.

● **Another partner: Government.** The railroad has been doing a lot of other things in the realm of self-help to improve operations, to make itself more efficient, to enhance its services and, ultimately, to turn a profit. But the C&NW, like most railroads today, needs the partnership of government if it hopes to succeed. Employee ownership, aside from being an incentive for greater productivity, could bring about the grass-roots support which often leads to a good working partnership with governments at all levels.

It's no secret, of course, that one of C&NW's biggest problems is the amount of trackage it owns and, therefore, must maintain. A strong branch line abandonment program is being pushed in C&NW territory. But, there's also strong opposition to it, and government authorization to abandon stretches of little-used tracks comes very slowly.

"There's no way this industry can reach its full potential if it's required to always be innovative and creative and come up with new services, new equipment, and so on, while at the same time it's got to hang on to the obsolete . . . and then pay for the obsolete with the benefits gained from the new," declares Provo. "This is absurd and ridiculous, because, for one thing, it hurts car utilization and over-all efficiency by draining money away from places where it would be more useful."

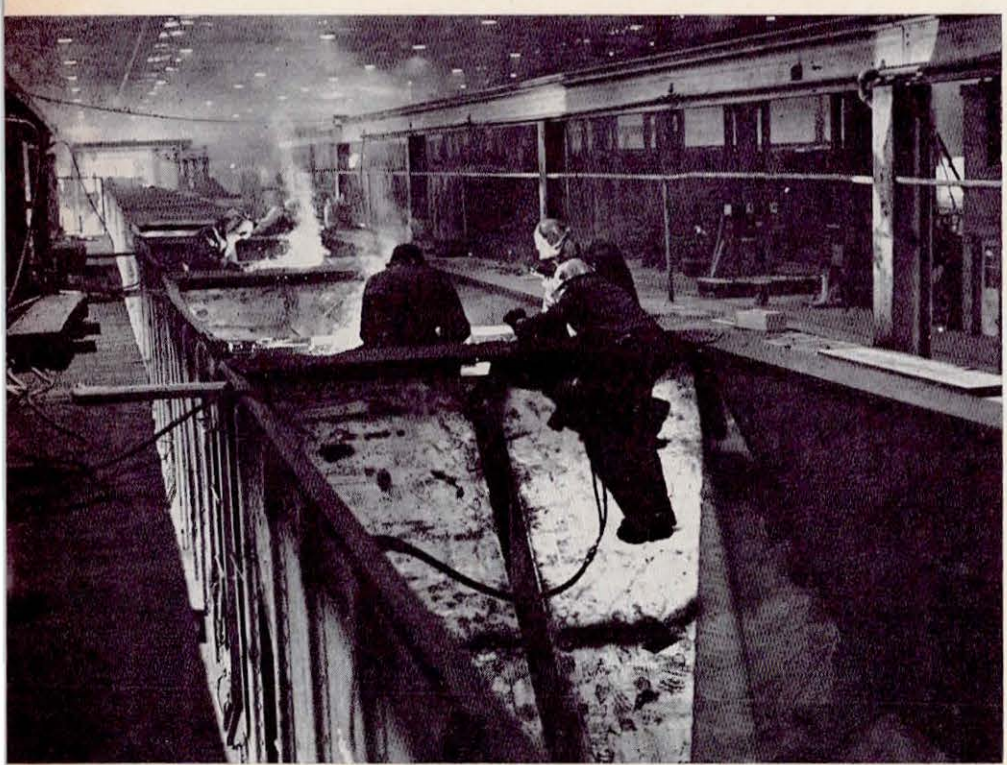
No matter who owns it—the employees or Northwest Industries—C&NW plans to push ahead with the abandonment program, Provo says. The program might get "a more sympathetic

"SUNRISE SERVICES"
President Provo often presides at early-morning conference where North Western officers examine "what went wrong" in the preceding 24 hours.

ear under employee ownership."

● **The taxation problem.** It could be, too, that the railroad could get fairer treatment from taxing bodies in the communities it serves if employees are the owners. "In many cases, we haven't had people who are willing to stand up for the railroad and protect its interests," Provo states. "However, if an employee living in a certain community has, say $500 invested in the railroad, he might begin asking 'Why is Joe Blow's company getting off so easy in paying taxes for something in the community, while my railroad is getting stuck with the big bill?' "

The day may be coming, too, says the road's president, when even the much-heralded—and, so far, profitable—commuter service will have to depend upon some kind of working relationship with governments. "If, in the Chicago area, the status quo would be maintained, we could compete, and



WELL-EQUIPPED, WELL-MAINTAINED
While investment in improvements declined this year, the railroad has invested heavily in equipment in the last decade and its fleet is as healthy as most.

PROFITABLE NOW, BUT—
Suburban service, now a money-maker, may soon require help from government.

compete very well, and keep on running 200 trains a day for years and years," says Provo. "But, things in the urban areas aren't going to remain the same."

● **Subsidized competition.** "You're not going to solve today's urban problems without first solving the transit problems, which means that Chicago's problems can't really be solved while a private system like ours is competing with subsidized systems, like Chicago Transit Authority."

Provo is a strong advocate of CMATS—Chicago Metropolitan Area Transportation System—a proposed public agency for operating or controlling all forms of surface passenger transportation in the six-county area that makes up Chicagoland.

Having seen slightly more than 1,000 passengers a day desert his service when the CTA's competing Kennedy Expressway rail transit line was opened, Provo likens the continual competition with subsidized systems to seeing "your arm being cut off an inch at a time." If park-and-ride stations are put in along the new transit line, they would probably "suck away more passengers from us," he concludes. "That's why I think it's inevitable that all the systems have to be put together so as to make more judicious use of all available capital."

● **High priority for ASTRO.** The plan recommended by ASTRO (America's Sound Transportation Review Organization), which also brings government into a close partnership with railroads, must have a high priority status, Provo contends. The railroad needs government help—to get new equipment, to restore credit so that profitability can be restored. As earning power is restored through government assistance, he adds, "we can then provide the service which shippers need, and we can also be self-sufficient again."

Meanwhile, as all the C&NW's pending partnerships—with employees and with government—move toward their days of decision, there's the business of running a railroad that still must carry on. Until the ICC's decision comes along, and perhaps even after it is rendered, the railroad is part of Ben W. Heineman's Northwest Industries. As such, it will be operated in the manner which he instituted and which Provo advocates, too.

The C&NW made a dazzling recovery under Heineman, and the pace set for the road by him has been maintained under Provo. By keeping close liaison with the governments it touches, the C&NW, under Provo and his 14,000 partners, could move into a period of new strength. This new experiment in employee ownership should garner a lot of attention if the government permits it. ■

Watching Washington

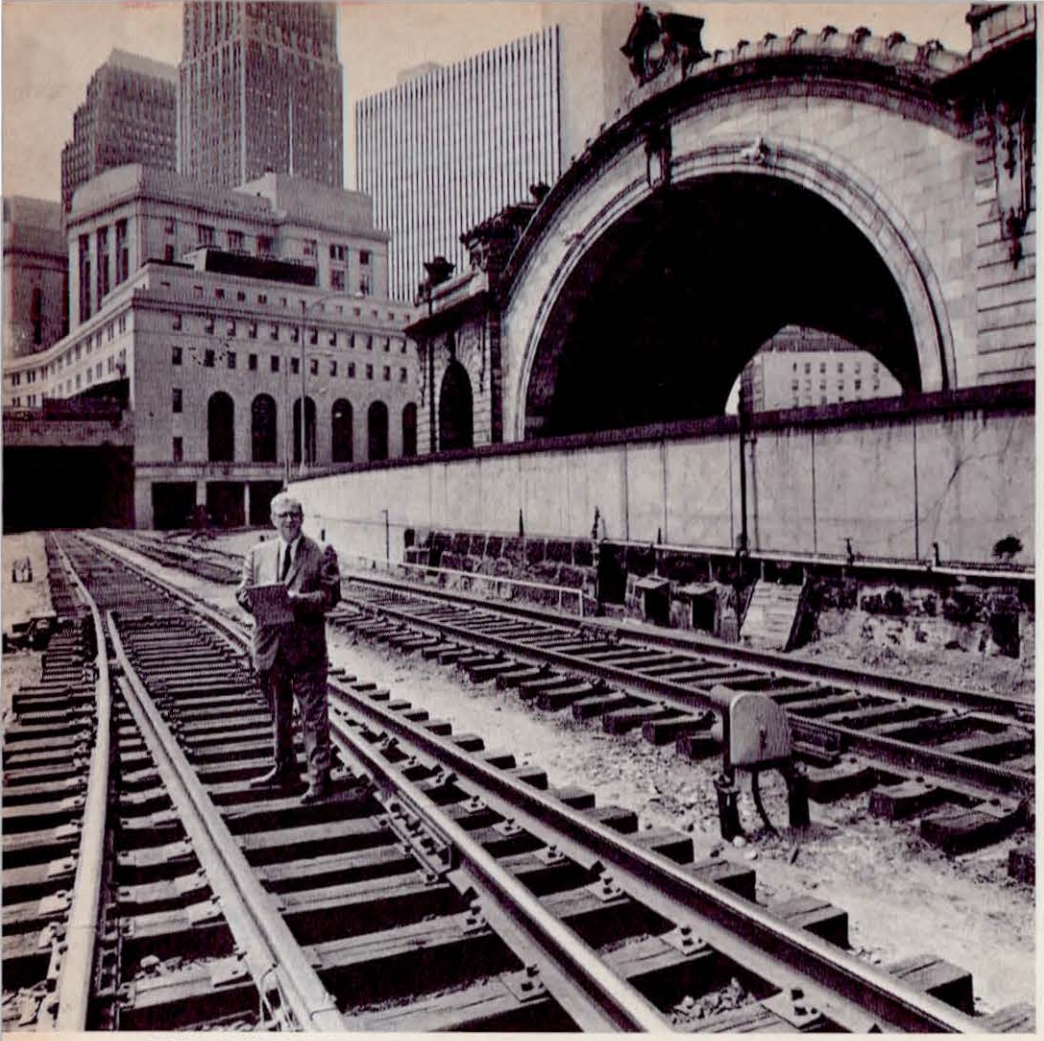
REID BEDDOW

THAT UNIFIED TRANSPORT FUND

The idea of a National Transportation Fund, which would consolidate existing highway and airport funds and from which allocations could be made to all modes, has captivated a good many thinkers in this city. Next year, when Congress gets down to serious transportation legislation writing, it could captivate more. What support that exists for a unified fund is diffuse: railroads, some DOT planners, Senate liberals, anti-highway and pro-environment individuals of all economic and political hues, a significant number of state governors, mass transit people. The main opponent of course is the highway lobby, whose special taxes would constitute the biggest single source of revenue to a consolidated fund. The highwaymen have already drawn the wagons into a circle on this one, resolutely and vociferously opposing even a modest diversion of Highway Trust Fund monies to non-highway uses. Their argument is simple: why should highway money paid only by highway users be used to upgrade other modes? Backers of a unified fund have their arguments: Highway user taxes were paid into the general fund of the U.S. Treasury before the creation of any special trust fund, i.e. truck taxes are not so sacrosanct as their payers make out; single modal trust funds tend to be self-perpetuating, continuing long after their original purpose has been fulfilled; a unified fund would provide greater flexibility in the allocation of Federal aid and would lead to the creation of a truly balanced national transportation system. At least these are the arguments of Sen. Edward M. Kennedy and Rep. Edward I. Koch (D.-N.Y.), who have introduced bills creating a unified fund. Rails, through the AAR's ASTRO recommendations, advance the point that highway and railroad grids complement each other, that their interests are not necessarily mutually exclusive. With three times as many trucks expected to be on the highways by 1980 as there are now, the existence of strong railroads is essential, rails say. Indeed, the ASTRO recommendations, in a rare instance of a business suggesting a tax on itself, suggests a waybill surcharge to finance the rail contribution to a unified fund. There the issue rests for the moment; we are sure to be hearing more about it.

METRO BUYS "BUY AMERICAN"

Washington, D.C.'s Metro board of directors voted 4-1 on Oct. 22 to reinstate a "Buy American" policy, which had been in abeyance since September. The policy gives a 15% price edge to domestic suppliers of equipment, e.g., a foreign supplier would have to bid less than $34 million to win a contract away from an American supplier submitting a bid of $40 million. The Metro board also ordered its staff to study a "Buy Local" plan to favor Washington-based suppliers and contractors, a directive that does not have equipment manufacturers losing sleep in this industryless town. Interestingly, unions joined U.S. equipment suppliers in lobbying to reinstate the Buy American policy.



PENN CENTRAL STATION is to be inner city terminus for TERL; L. P. Kane, one of appraisers, checks tracks and tunnel preliminary to Port Authority acquisition.

Pittsburgh:

When it comes to mass transit, the approach taken in Pittsburgh can only be termed "multi-modal." Whether the best possible use is being made of all possible modes has become the subject of bitter local controversy.

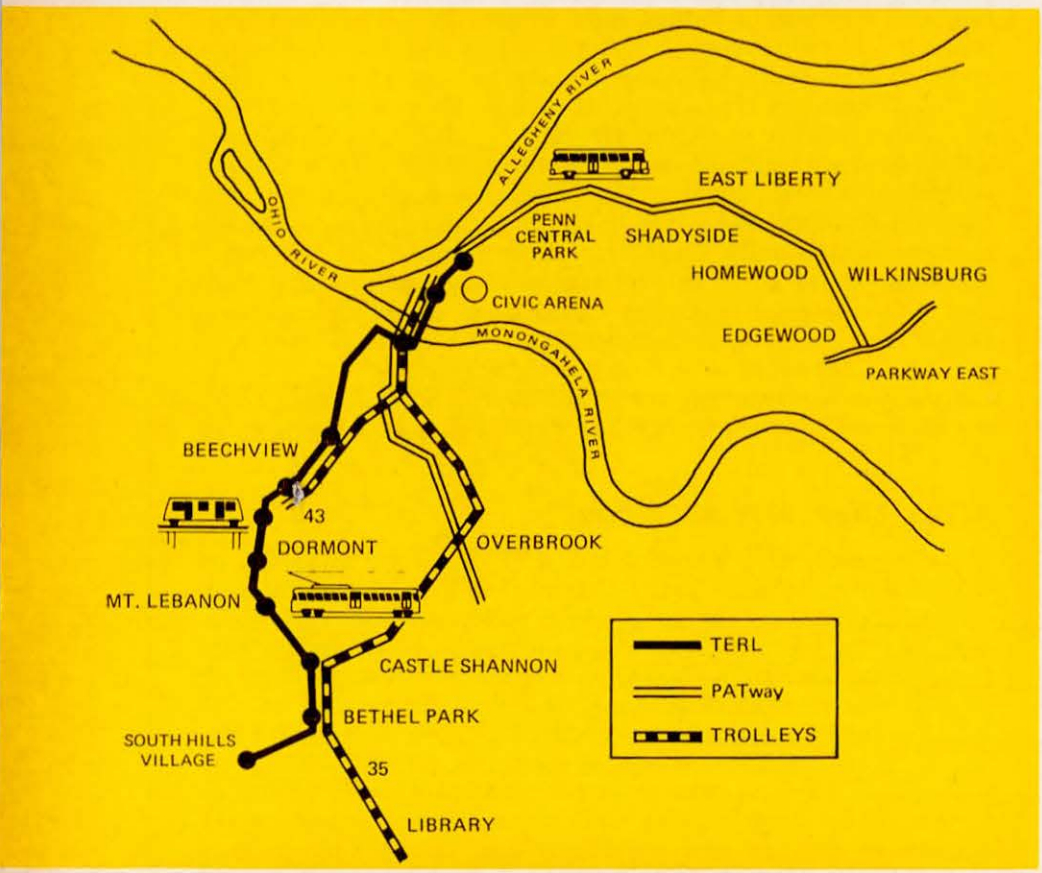
Right now Federal and local funding has been assured for $228.6 million (including 10% contingencies) to finance the following mass-transit projects in Pennsylvania's Allegheny County:

—Rehabilitation of 15.3 miles of existing trolley routes and 70 street cars at a cost of $6.5 million;

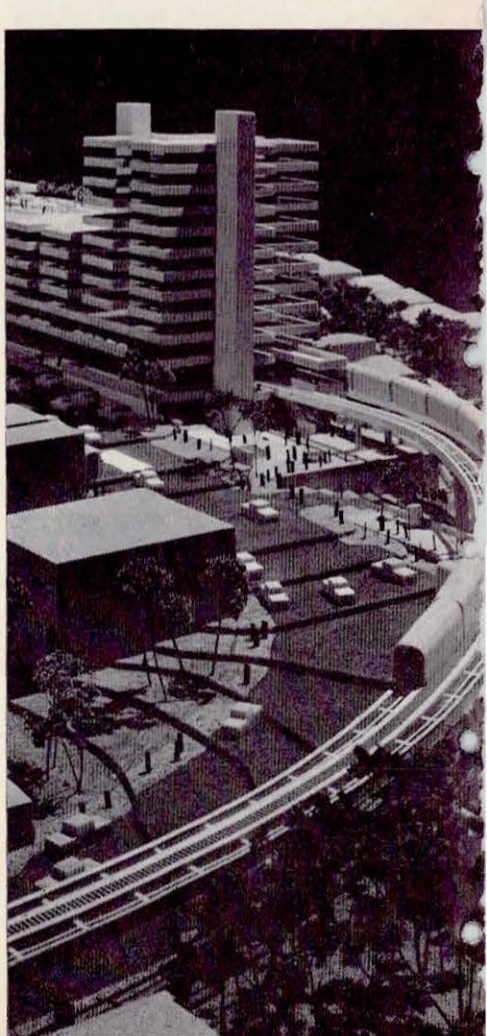
—Construction of 12.5 miles of new two-lane highways (PATways) for exclusive use of express buses moving to and from the Golden Triangle, the central business district, at a cost of $38.7 million;

—Building of an 11-mile grade-separated Transit Expressway Revenue Line (nee "Skybus" but now "TERL") at a cost of $162.5 million.

Additionally, there is currently under way a study of Allegheny County's only



RADIATING ROUTES, based on previous rail networks which are to provide rights-of-way, will be utilized by three modes scheduled for the Early Action Program.

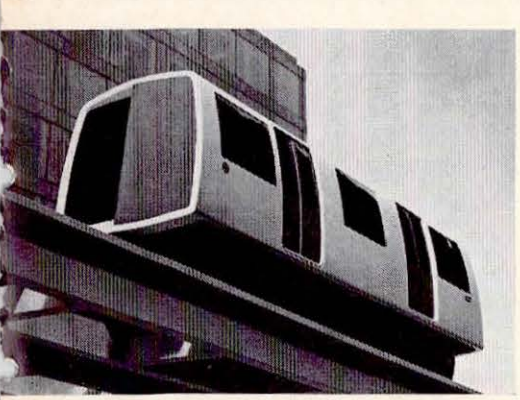


Multi-modal approach to transit

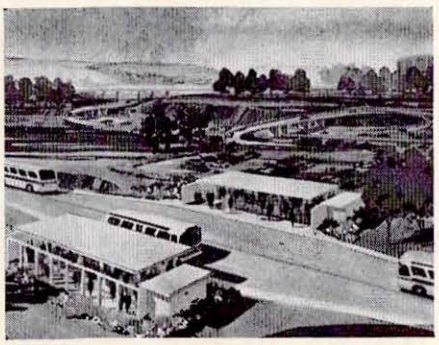
surviving rail commuter service to determine what, if anything, should be done about its future operations.

● **The perennial study.** The $228-million authorization (exclusive of an investigation of the Baltimore & Ohio suburban trains) constitutes the Early Action Program (EAP) of the Port Authority of Allegheny County which since 1964 has operated the trolleys and local buses in the Pittsburgh metropolitan area. Planning for improved transit for this hilly western Pennsylvania region which is trisected by three major rivers goes back considerably further—in fact to 1906. Since then there have been eleven separate studies, at least one in each decade of this century. Until June 1970, however, all had foundered on the shoals of finance and/or politics.

Several of the earlier transportation studies had recommended fast, comfortable rapid-transit systems. It is the Port Authority's contention that at long last it is moving to implement what area planners have said for over 60 years was necessary for Pittsburgh. If EAP's financial problems have been solved, it is apparent that Early Action has not moved out of the realm of politics.



TRANSIT EXPRESSWAY vehicles, one to six in a train, are to carry 7,600 one-way riders in peak hour; Port Authority aims at maximum use of air rights (left).



PC RIGHT-OF-WAY would become exclusive route for express bus service.

The two Democratic county commissioners who voted funds for EAP have been consistently opposed by their single Republican colleague. Pittsburgh's Mayor Peter Flaherty has been less than overwhelming in his backing of Early Action. Many of the 157 cities, boroughs and townships in Allegheny County have taken stands for and against the Program.

Various taxpayers' groups, a militant Peoples Representatives on Mass Public Transit (PROMPT) and other civic groups have been waging generally uncoordinated campaigns against Early Action. Some are anti-Skybus, some are anti-PATway, and some have declared against both.

● **Technical opposition.** Then there is an interesting technical confrontation. Westinghouse Electric, developer of TERL (with assistance from Port Authority plus Federal funding), has been opposed by Westinghouse Air Brake which has plugged for a more conventional rail transit system, claiming such technology would be more economical and more easily implemented. Since many of these claims are endorsed by the citizens' groups, there has been a sort of informal alliance with WABCO. There is apparently a drive to make TERL and PATway the subjects of a public referendum in the 1971 elections.

While there has been heated controversy about the technology to be utilized, there has been relatively little opposition to the routes, although the priority of their building has sometimes been questioned. All of the transit proposals since 1906 have recommended lines in essentially the same corridors and it is these which Port Authority says it is now beginning to develop.

Virtually all the proposed routes are, or have been, occupied by railroads once traversed by commuter trains, or by trolley lines of the former Pittsburgh Railways, largest transit operation taken over by Port Authority. It is these existing or former rail facilities which are to comprise most of the right-of-way for EAP's major projects.

● **The TERL trail.** Transit Expressway is a case in point. TERL's downtown terminus will be Penn Central Park (PC's present Pittsburgh station) and the new-style guideways are then to replace and traverse 1.6 miles of PC's present St. Louis passenger line via a tunnel, Monongahela River bridge and hillside right-of-way along the base of Mount Washington. Next, Expressway is to swing up into the abandoned 3,300-foot Wabash tunnel vacated by the Pittsburgh & West Virginia two decades ago. After a stretch of new alignment, TERL would displace, or coexist with, present streetcar lines through most of the remainder of its 10.5-mile route.

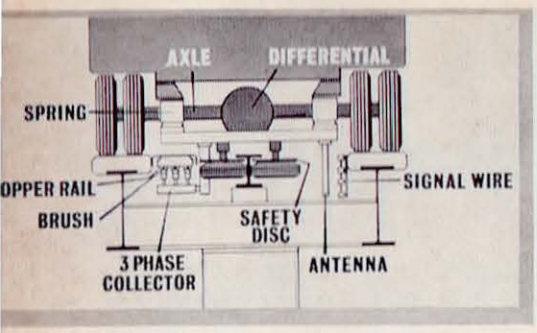
The South PATway will pass through the South Hills trolley tunnel—putting buses through what has until now been exclusively a streetcar bore. A new alignment south of that tunnel for 3 miles will bypass many of the present vehicular bottlenecks to deliver buses to regular streets and roads beyond the point of maximum highway congestion.

● **Railroad involvement.** What was once Penn Central's main commuter train route east from the downtown area would constitute the right-of-way for the East PATway extending 8 miles to Edgewood, a point where buses would again go on to regular streets and highways. Port Authority sees a greatly speeded bus service with such an expedient.

But for UMTA's intervention earlier this year, there would have been a completely rubber-tired orientation to Port Authority's Early Action Plan. The initial Federal grant of $8.7 million for engineering, design and right-of-way acquisition was preceded by Port Authority's agreement that streetcar technology be retained for three years beyond the date when TERL becomes operational.

In its application for UMTA funds, Port Authority gave its justification for Transit Expressway: "TERL will be vitally important to Allegheny County and its application will have a profound impact on other medium-density urban areas throughout the U. S. The Transit Expressway is a bold, yet completely viable new concept which involves electrically powered, rubber-tired vehicles operating at high frequency on an exclusive roadway. The concept has been proved in a four-year demonstration at South Park and its public acceptance has been fully documented.

"Transit Expressway has distinct ad-



SKYBUS test near Pittsburgh used smaller cars than 35-foot units planned for TERL. Recent test involved switch (right).

vantages over traditional steel-wheel, steel-rail systems for medium density transit corridors. Minimum-weight, small vehicles allow tight curves and steep grades on a compactly designed roadway. This great flexibility allows TERL to use steep hillside property and many existing rights-of-way to avoid much costly tunneling . . . Both capital and operating costs will be lower than a comparable traditional system."

Westinghouse Air Brake had proposed that the three South Hills trolley lines become the nucleus for development of a county-wide rail rapid-transit system. In its proposal, WABCO estimated that a 28-mile system, including an eastern extension via the Penn Central right-of-way to Wilkinsburg (now scheduled for the East PATway), could be built for $114 million—about half the cost of the system now being developed.

During a legislative investigation, Minority County Commissioner Robert J. Hunt, leading opponent of TERL, has characterized the technology as possessing "an awesome capability for swallowing vast sums of money and producing very little in the way of better, safer or more usable product . . . Present indications are that it will provide an inferior service of insufficient volume for our needs. Projection from available data indicates that construction costs will exceed competitive technologies by as much as three or four times, and the resulting system produced from it fails to meet the demands of the community."

● **Fixing final costs.** Actually, final clearance for Early Action was preceded by 11 months of close scrutiny by the U.S. Department of Transportation. Starting from the approval date of June 10, 1970, the Program is scheduled to be fully operational in 66 months—by 1976. Soon, final cost estimates should be available.

Kaiser Engineers has assigned H. A. Thomas, Jr. as project director for TERL; detail design in all its phases will soon be in high gear. Property acquisitions are to start shortly. Already Port Authority is moving on the rehabilitation of all of the existing streetcar facilities.

Port Authority stresses that all parties are committed to a construction philosophy which gives consideration to environmental factors. Engineers, architects and such specialists as landscape architects, urban designers and acoustic engineers are to produce physical structures in harmony with their surroundings. ■

"A legitimate technological argument"

MONORAIL MODEL was cited as distributive system by WABCO's K. Bunnel (left) and W. J. Walker.

Even the Port Authority concedes that there was a "legitimate technological argument" in the WABCO and Welco transit proposals for Allegheny County. In question was the "means" and not the "end," since both firms have been strong proponents of rapid transit.

G. W. Jernstedt, Welco's director of transportation activities, notes that one of the most significant characteristics of rapid transit is its ability "to shape and direct the growth of an urban area." He feels Transit Expressway is particularly suitable for the topography and population patterns of Pittsburgh. For five years an experimental 9,300-foot loop near Pittsburgh has been the proving ground for Expressway technology.

Final appraisal of the lightweight cars' ability to operate with ice and snow on the concrete track is to be completed in coming months. Already proved are the capacity to operate on 10% grades, to operate through switches, and to operate fully automated. Actually, test work would probably be complete now but for an UMTA freeze on funding in 1969, since restored. DOT spokesman have more recently indicated a lessening of enthusiasm for exotic transit technology.

WABCO has contended that consultants' rating of Transit Expressway as less costly than a conventional rail rapid transit systems was based on rail proposals more exotic than necessary. Keith Bunnel, vice president of WABCO's Transportation Group, observes that enclosed air pressure tubes and air cushion vehicles "will get considerable attention during the 1970s, but urban transportation problems need immediate solutions. They cannot be put aside for ten years or more while these new ideas are advanced to meet the standards of safety and economic practicality."

W. J. Walker, WABCO's manager of transit markets, has urged transit planners to stop "limiting our creativity to technology," and be creative about applications of existing technology, about financing, and about structuring institutions concerned with urban transportation. "To continually rely on new technology as a panacea is not a really creative approach because it will not make all our problems go away," he said.

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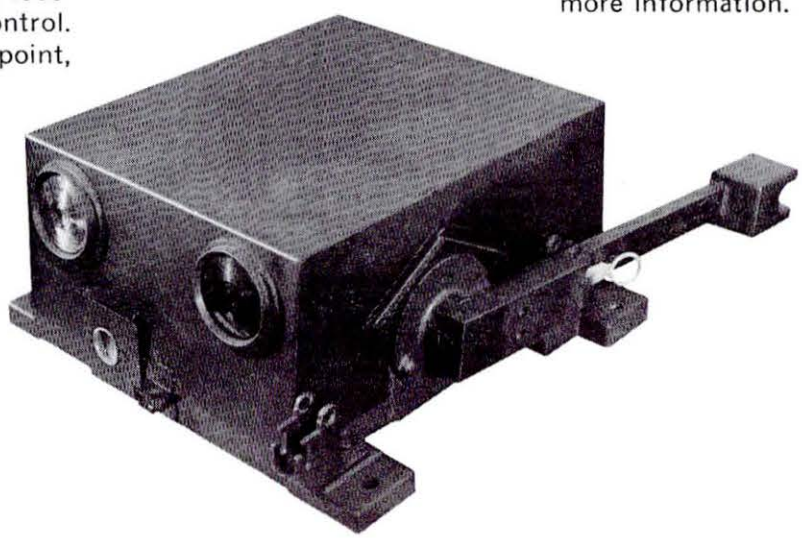

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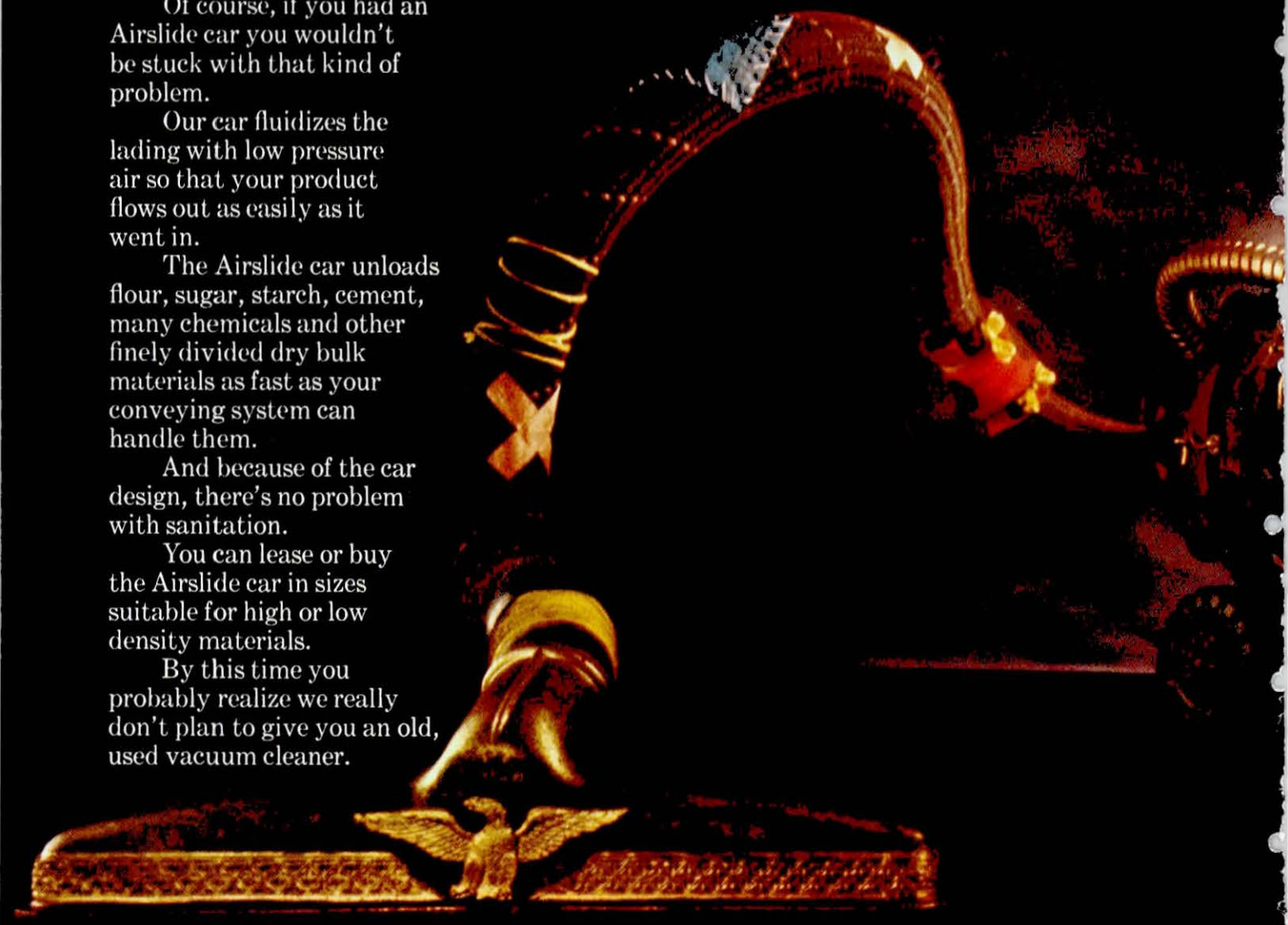

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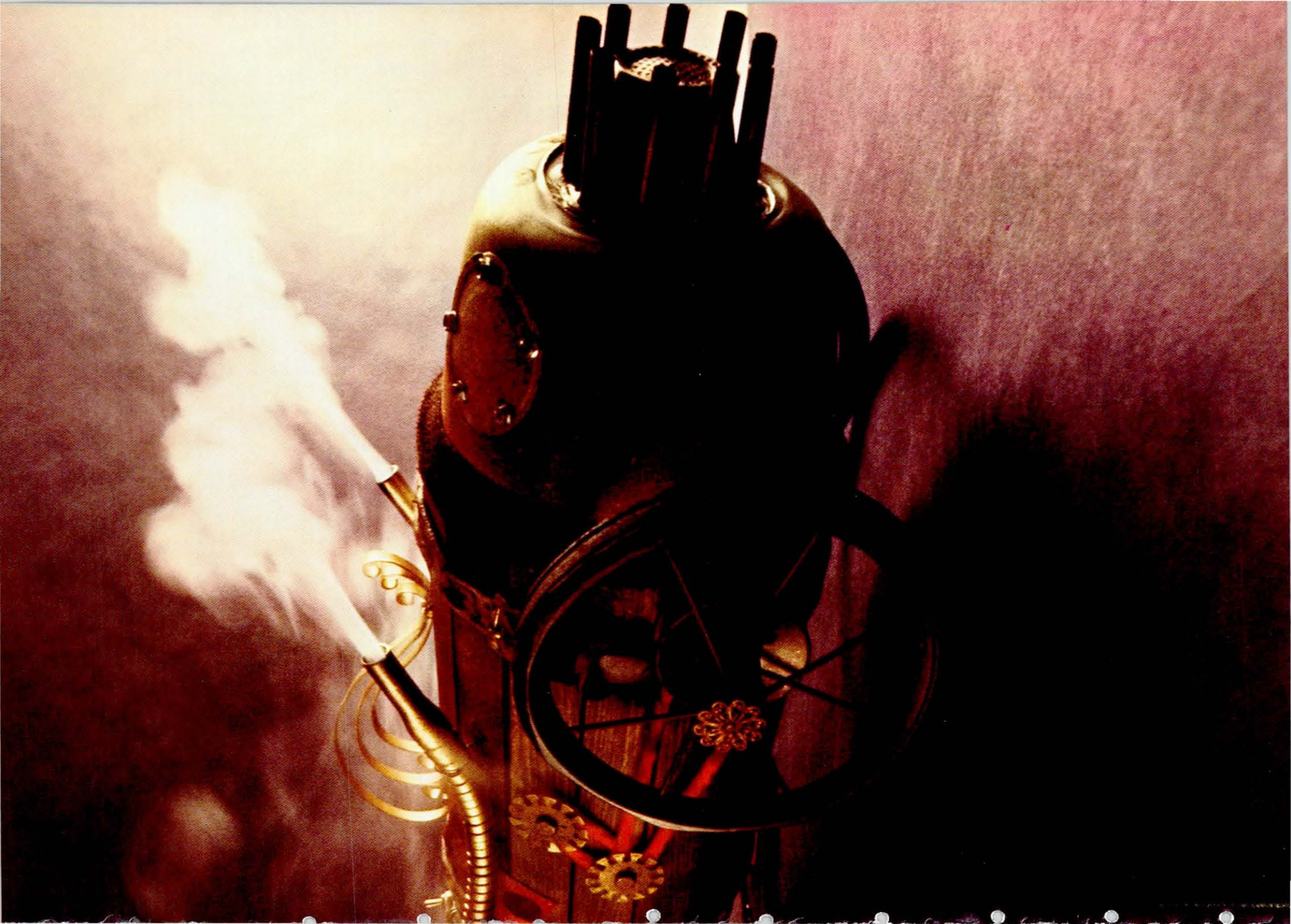

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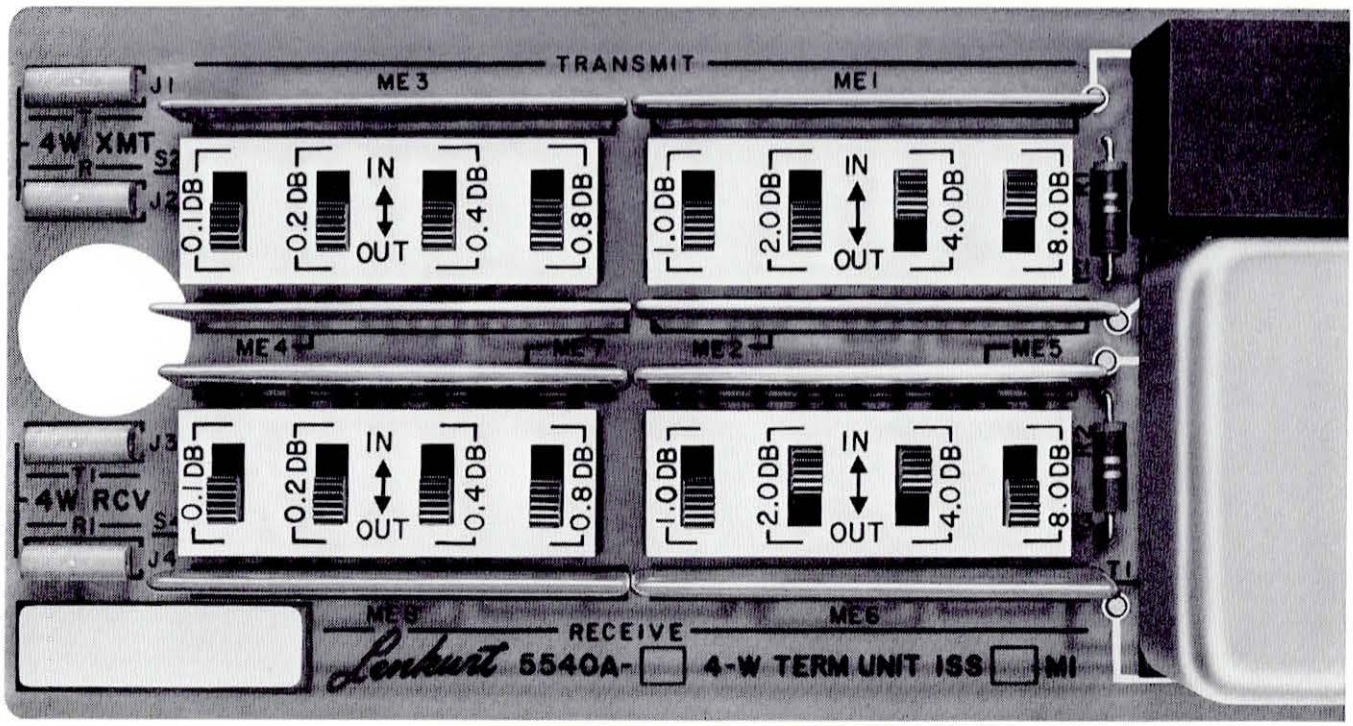

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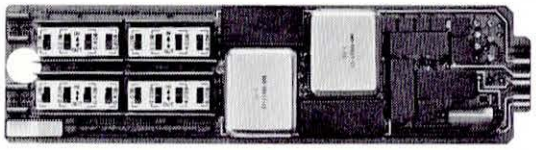

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Circle 15 on coupon page 63

What the AAR track standards spell out

The standards are intended as tolerance specifications to permit the operation of trains at their maximum speeds.

The AAR's recommended standards for track maintenance (RA, Oct. 26, p. 12) may serve two functions. On the one hand, individual railroads may put them into effect if they wish. On the other hand, the standards may conceivably serve as the basis for track requirements to be imposed on the railroads by the Department of Transportation under the terms of the Federal Railroad Safety Act.

The 42-page document containing the AAR standards spells out in detail allowable tolerances for virtually every feature of track maintenance. The introduction states that they apply to all trackage owned by a railroad, and are intended as tolerance specifications to permit the operation of trains at designated speeds. It is further specified that "whenever these standards are not met, appropriate action shall be taken after notice to correct the condition or to restrict train operation accordingly."

It is also explained in the introduction that the "limiting conditions in these standards apply to track conditions existing in isolation. When any of these conditions exist in combination, judgment shall be used to determine the extent to which such combination shall be permitted and the corrective action to be taken."

● **Five classes of track.** For the purpose of the specifications track is divided into five classes based on the maximum authorized speed of trains. The five classes are: A—61 to 80 mph;

Table 2.2.2.1

Deviations in track gage

Class of track	Tangents		Curves	
	Minimum	Maximum	Minimum	Maximum
A (61-80 mph)	4 ft 8 in	4 ft 9 in	4 ft 8 in	4 ft 9½ in
B (46-60 mph)	4 ft 8 in	4 ft 9¼ in	4 ft 8 in	4 ft 9½ in
C (31-45 mph)	4 ft 8 in	4 ft 9¼ in	4 ft 8 in	4 ft 9¾ in
D (16-30 mph)	4 ft 8 in	4 ft 9½ in	4 ft 8 in	4 ft 9¾ in
E (0-15 mph)	4 ft 7¾ in	4 ft 9¾ in	4 ft 7¾ in	4 ft 9¾ in

Table No. 2.5.3.2.1

Limiting individual variations in track surface

	Class of track				
	E 0-15 mph	D 16-30 mph	C 31-45 mph	B 46-60 mph	A 61-80 mph
(a) Tangents:					
(1) Run-off per 31 ft. at end of track raise-max.	3½ in	3 in	2¼ in	1½ in	1¼ in
(2) Variation from uniform profile on either rail-max. (mid-ordinate of 62-ft. chord)	4 in	3 in	2½ in	2 in	1½ in
(3) Variation at any point from zero cross level, excluding elevation transitions-max.	3½ in	2½ in	2 in	1½ in	1¼ in
(4) Change in cross level between any two points less than 62 ft. apart-max.	4 in	3 in	2½ in	1¾ in	1½ in
(b) Curves:					
(1) Run-off per 31 ft. at end of track raise-max.	3½ in	3 in	2¼ in	1½ in	1¼ in
(2) Variation from uniform profile on either rail-max. (mid-ordinate of 62-ft. chord)	4 in	3 in	2½ in	2 in	1½ in
(3) Variation at any point from prescribed elevation-max.	3 in	2 in	1½ in	1¼ in	1 in
(4) Change in cross level between any two points less than 62 ft. apart-max.	3 in	2½ in	2 in	1¾ in	1½ in
(c) Elevation transistions:					
(1) Variation in elevation from that prescribed-max.	2 in	1¾ in	1½ in	1¼ in	1 in
(2) Change in cross level per 31 ft.-max.	2 in	1¾ in	1½ in	1¼ in	1 in

Table 2.3.3.4.1

Limits of deviation from uniform alinement

Class of track	Tangents: Mid-offset from 62 ft line	Curves: Mid-ordinate variation from 62 ft chord
A (61-80 mph)	1 in	1 in
B (46-60 mph)	1½ in	1½ in
C (31-45 mph)	2 in	2 in
D (16-30 mph)	3 in	3 in
E (0-15 mph)	Not applicable	Not applicable

Table No. 3.2.3.1.1

Ballast sections

Class of track	Train speed (MPH)	Minimum width of ballast shoulder beyond ends of ties	Minimum percent of ballast in tie cribs
A	61-80	6 in	70
B	46-60	4 in	70
C	31-45	3 in	60
D	16-30	2 in	60
E	0-15	2 in	50

Table 3.3.4.1

Maximus spacing for timber cross ties

Class of track	Train speed (MPH)	Minimum size of tie	Minimum number of ties per 39-ft panel	Minimum number of ties per mile	Approximate center to center spacing
		Track having conventional jointed rail			
A	61-80	6 in X 8 in X 8 ft	20	2710	23.5 in
		7 in X 7 in X 8 ft	20	2710	23.5 in
B	46-60	6 in X 7 in X 8 ft	20	2710	23.5 in
		6 in X 8 in X 8 ft	19	2560	24.5 in
C	31-45	6 in X 6 in X 8 ft	19	2560	24.5 in
		6 in X 8 in X 8 ft	18	2440	26.0 in
D	16-30	6 in X 6 in X 8 ft	18	2440	26.0 in
		6 in X 8 in X 8 ft	17	2290	27.5 in
E	0-15	6 in X 6 in X 8 ft	17	2290	27.5 in
		6 in X 8 in X 8 ft	16	2150	29.0 in
		Track having continuous welded rail (CWR)			
A, B	46-80	6 in X 7 in X 8 ft	20	2710	23.5 in
		6 in X 8 in X 8 ft	20	2710	23.5 in
C, D, E	0-45	6 in X 6 in X 8 ft	19	2560	24.5 in
		6 in X 8 in X 8 ft	18	2440	26.0 in

Table 3.3.6.1

Tie condition criteria

Defect or condition	Train speeds (MPH)	Class of track	Maximum number of consecutive timber ties permitted to contain the described defect or condition		
			Tangent track and curves through 3 deg	Curves over 3 deg to 5 deg incl	Curves exceeding 5 deg
a) Cross ties or switch ties completely broken through between the field sides of the rail bases.	61-80	A	3	2	—
	46-60	B	3	3	2
	31-45	C	4	3	2
	16-30	D	4	4	3
	0-15	E	5	5	4
b) Bridge ties completely broken through.	0-80	A to E	2	2	1
c) Lateral movement under traffic of the tie plates or base of rail with respect to the tie in excess of ½ in.	61-80	A	4	3	—
	46-60	B	5	4	3
	31-45	C	6	5	4
	16-30	D	7	6	5
	0-15	E	8	7	6
d) Ties split to the extent that they will not hold spikes or will permit the ballast to work up through the tie.	61-80	A	4	3	—
	46-60	B	5	4	3
	31-45	C	6	5	4
	16-30	D	7	6	5
	0-15	E	8	7	6
e) Ties plate cut more than 40 percent of the thickness of the tie.	61-80	A	8	6	—
	46-60	B	10	8	8
	31-45	C	12	10	10
	16-30	D	14	12	12
	0-15	E	16	14	14

B—46 to 60 mph; C—31 to 45 mph; D—16 to 30 mph; and E—0 to 15 mph.

The specifications, largely in tabular form (they contain 19 tables), are given to a considerable extent in terms of maximum permissible variations from stated conditions. However, in some cases the tolerances are given in terms of the minimum condition permitted.

When deviations are found to exist from the stated tolerances it is specified that corrective or protective action be taken.

Highlights of the standards, including the more important tables, are given in this article.

Matters involving the right of way are disposed of in a few short sentences which provide that growth of vegetation should be encouraged on slopes of embankments and cuts to prevent erosion, but that vegetation on the right of way should be controlled to prevent interference with drainage and the visibility of roadway signs and signals.

As might be expected, a considerable portion (15 pages) of the standards is devoted to provisions governing track geometry. In a section on track gauge it is stated that track may be gauged as follows:

"In designated tangent track locations—4 ft 8¼ in.

"On curves:

(1) Up to 6 deg incl.—4 ft 8½ in.

(2) Over 6 deg to 10 deg incl.—4 ft 8½ in to 4 ft 9 in.

(3) Over 10 deg—4 ft 8½ in to 4 ft 9¼ in."

Allowable deviations in track gauge for both tangents and curves are given in Table 2.2.2.1. As for the gauge through frogs and track crossings it is stated that corrective action should be taken when the gauge varies more than ⅜ in. in Class A, B and C tracks from the standard of from that specified in paragraphs (1), (2) and (3) above, "or other designated dimension."

● **Variations in track surface.** A table (No. 2.5.3.2.1) gives limiting individual variations in track surface but supplemental instructions are given in the following paragraph:

"Limiting track surface condition criteria related to harmonic roll action of cars, where corrective or protective action is required, should be determined by local investigation or service testing, particularly where high centers of gravity are involved in connection with movement of large capacity cars. The variations in design of cars and the physical characteristics and operating conditions of the routes over which they may be moved make it impractical to establish quantitative limits."

A table (No. 3.2.3.1.1) giving the ballast sections for conventional jointed track is supplemented by this statement:

(Continued on page 46)

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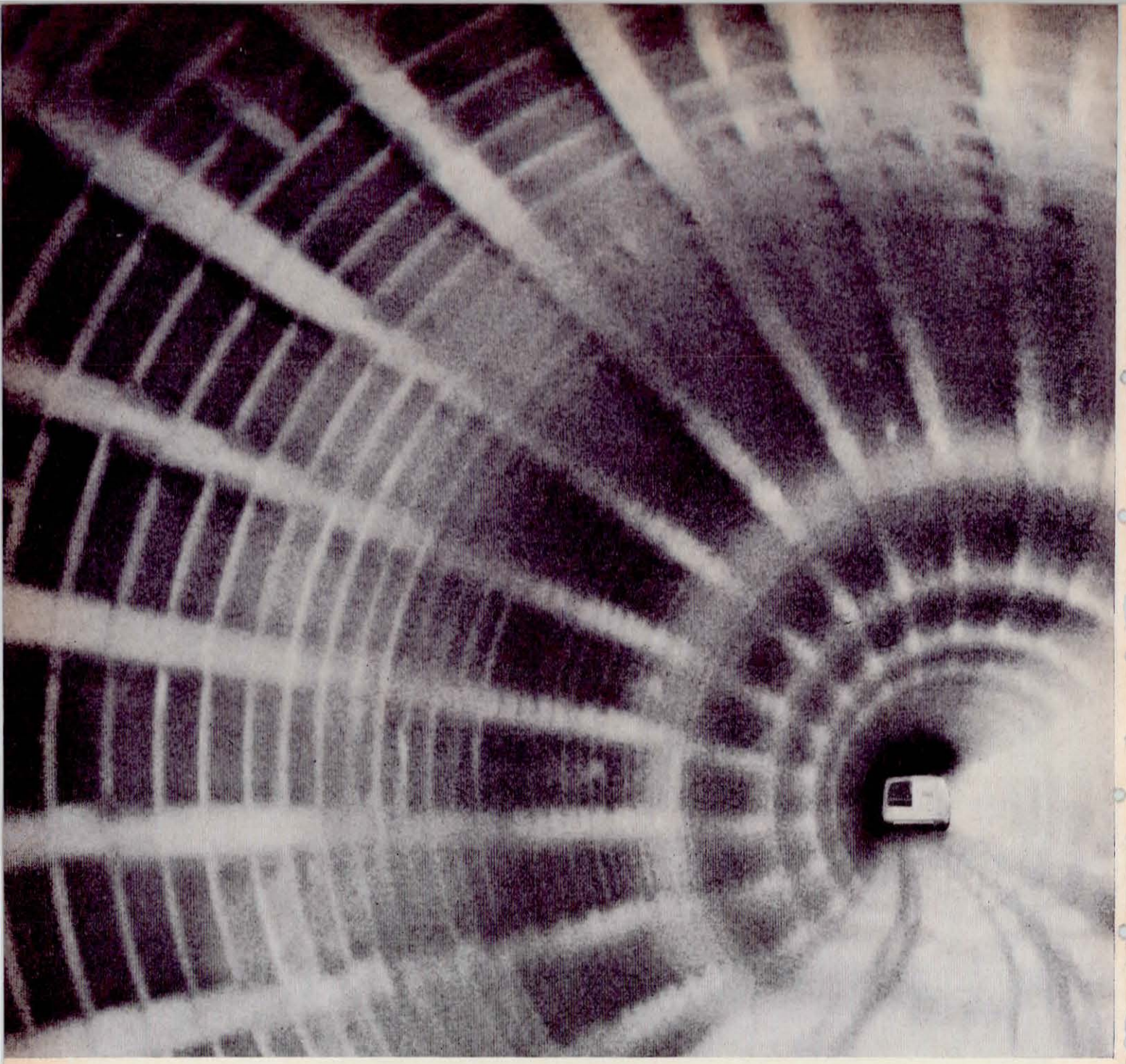

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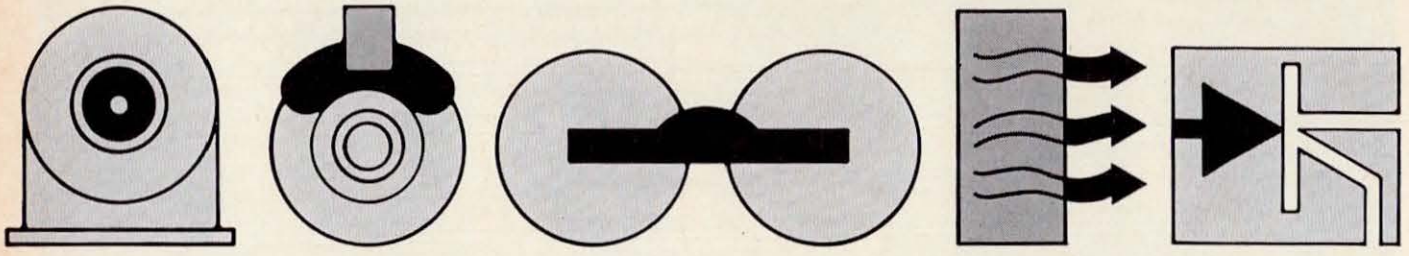

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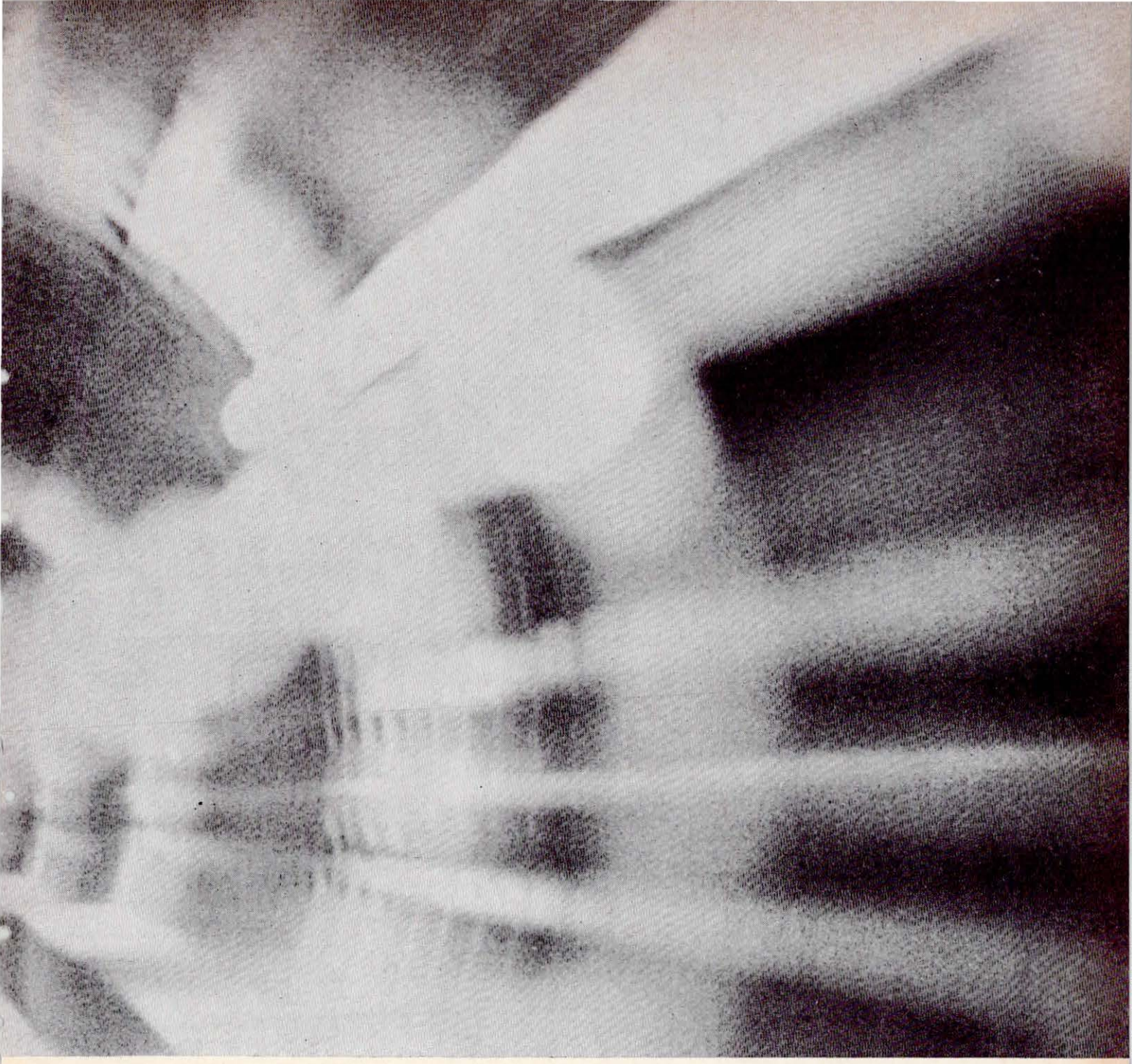

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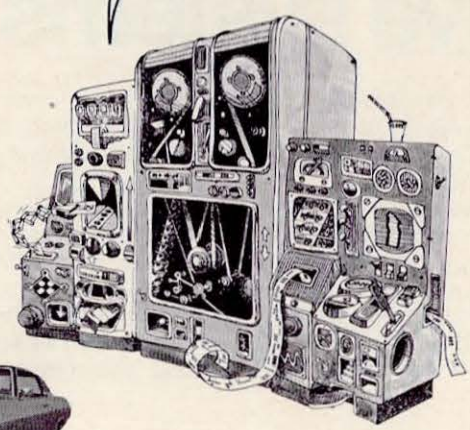

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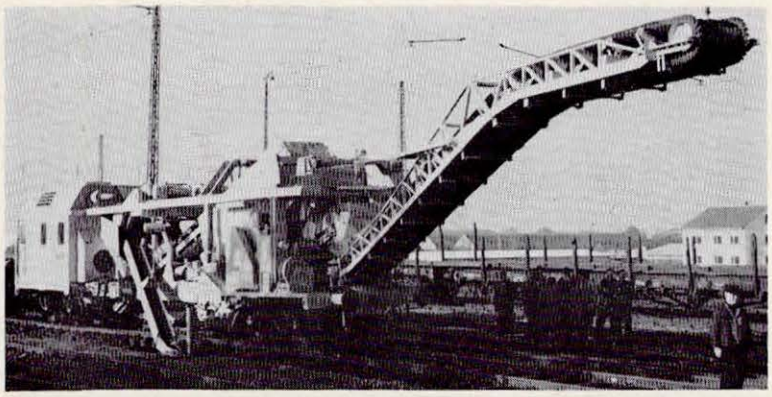

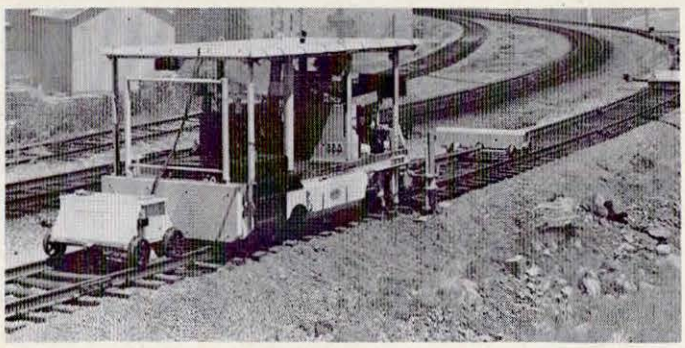

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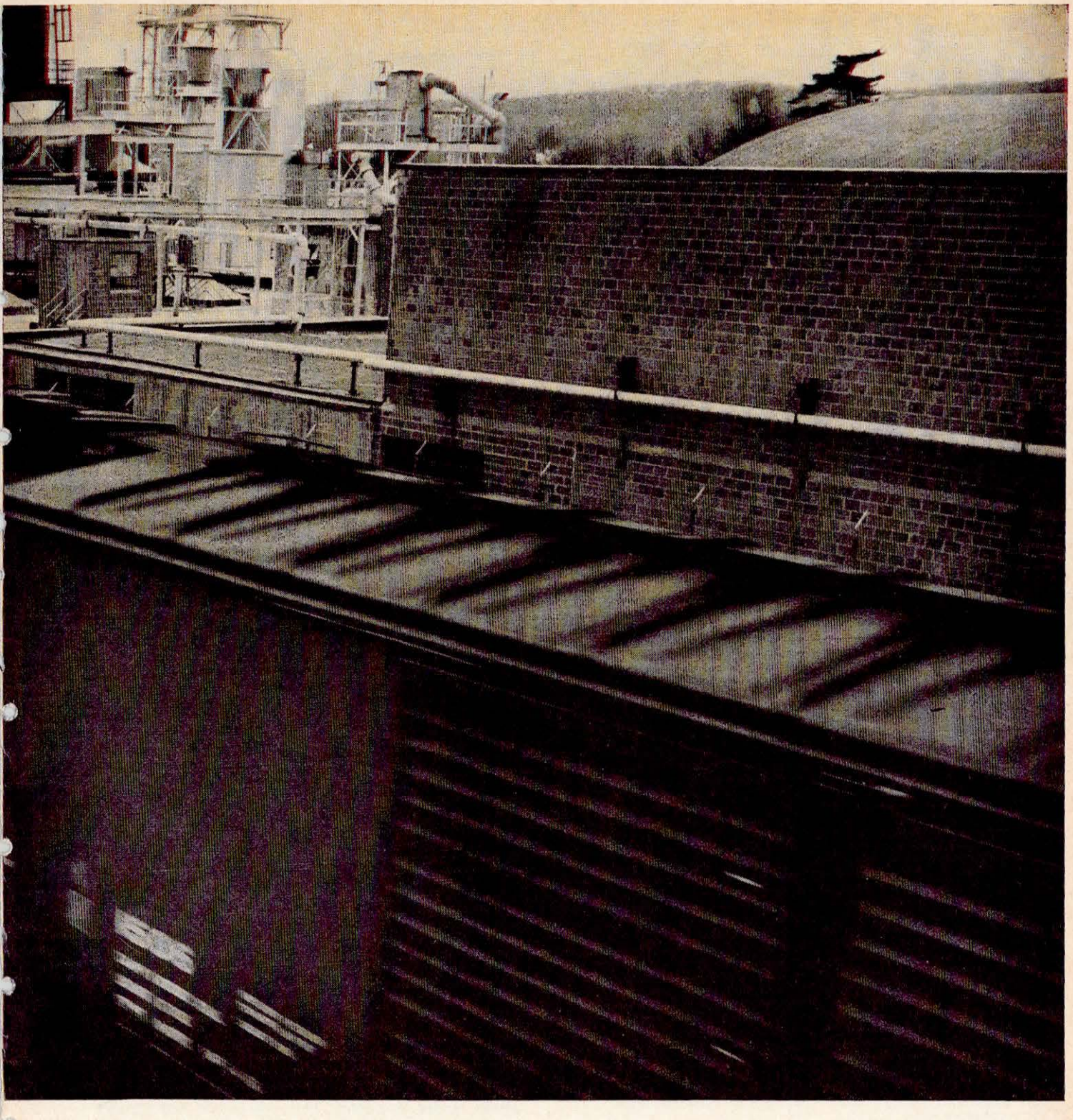

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Circle 20 on coupon page 63

What AAR track standards specify

(Continued from page 38)

"For track having continuous welded rail (CWR), the minimum width of ballast shoulder beyond the ends of ties shall be 6 in., measured horizontally from the end of the ties at a point 5 in. above the bottom of the ties, and the tie-crib section shall be filled with ballast to at least 80% of its volume."

It is further specified that in any ten consecutive tie cribs, "a minimum of seven cribs shall meet or exceed the requirements prescribed in Table 3.2.3.1.1" or in the previous paragraph.

Table 3.4.4.1

Limits for rail head wear

Class of track	Train speeds (mph)	Maximum permissible reduction in rail head area for various rail sections: Under 70 lb	70 lb to 84 lb	85 lb to 99 lb	100 lb to 112 lb	113 lb to 129 lb	130 lb and over
A	61-80	—	—	—	30%	34%	36%
B	46-60	—	—	30%	32%	36%	38%
C	31-45	—	20%	32%	34%	38%	40%
D	16-30	20%	24%	34%	38%	42%	44%
E	0-15	24%	28%	36%	42%	46%	50%

In a section on ties it is specified that "timber cross-ties, switch ties, or bridge ties shall be replaced or repaired promptly when the ties are damaged or the wood fibers have failed or deteriorated to the extent of conditions specified in Table 3.3.6.1."

● **When ties are missing.** On the subject of missing ties it is stated that "when two or more consecutive timber ties are missing, the condition shall be corrected or appropriate speed restriction placed to protect the movement of trains until [it] can be corrected."

Table 3.5.4.3.2.1

Rail holding track spikes

Maximum number of ties in any 10 consecutive ties permitted to have all rail holding track spikes missing

Class of track	Train speeds (mph)	Tangent track and curves through 2 deg	Curves over 2 deg to 4 deg inclusive	Curves over 4 deg to 6 deg inclusive	Curves exceeding 6 deg
A	61-80	3	2	2	—
B	46-60	3	2	2	2
C	31-45	4	3	2	2
D	16-30	5	4	3	2
E	0-15	6	5	4	3

Table 3.4.2.1

Minimum requirements

Minimum weight of rail	Maximum train speed
50 lb	15 mph
60 lb	25 mph
70 lb	40 mph
75 lb	45 mph
80 lb	45 mph
85 lb	55 mph
90 lb	60 mph
100 lb	80 mph

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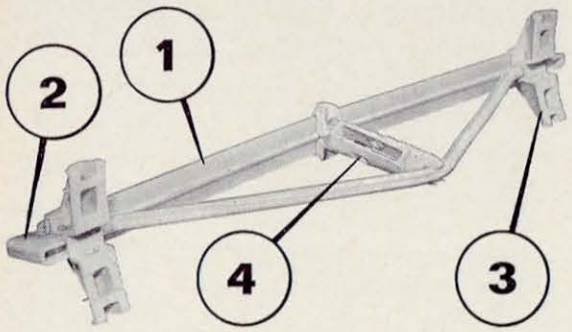

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Limits for allowable rail-head wear are given in Table 3.4.4.1, and "the rail shall be replaced or the train speeds reduced accordingly" when the rail head wear reaches the limits specified. It is further stated that the "limits for reduction in rail head area shall include the combined tread wear and flange wear on both the gauge and field sides of the rail head. However, in no case shall the maximum flange wear at the gauge line of the rail exceed ⅓ of the original railhead width. Head flow shall be considered as loss of head area."

Another provision states that in any track where train speeds exceed 15 mph, rails known to contain a detail fracture, an engine-burn fracture or an ordinary break shall be removed from the track or an appropriate speed restriction placed to protect the movement of trains until the defective rails have been removed, or the rail defect protected by the application of joint bars to each side of the rail.

● **Rail joint requirements.** On track having conventional jointed rail where train speeds are in excess of 15 mph, rail joints, it is specified, "shall conform to the following requirements:

"(1) Each joint shall have at least one effective bolt in each of the two rails joined.

"(2) Each joint shall have at least one sound joint bar securely in place. A sound bar is defined as one which is not broken through or cracked between the middle two bolt holes."

Another provision: "When both joint bars are broken through between the middle bolt holes, train movements over the joint shall be made only on hand signals at appropriate reduced speed."

On the subject of rail anchors it is specified that "on continuous welded rail (CWR) each rail shall be effectively anchored in both directions on at least every third tie."

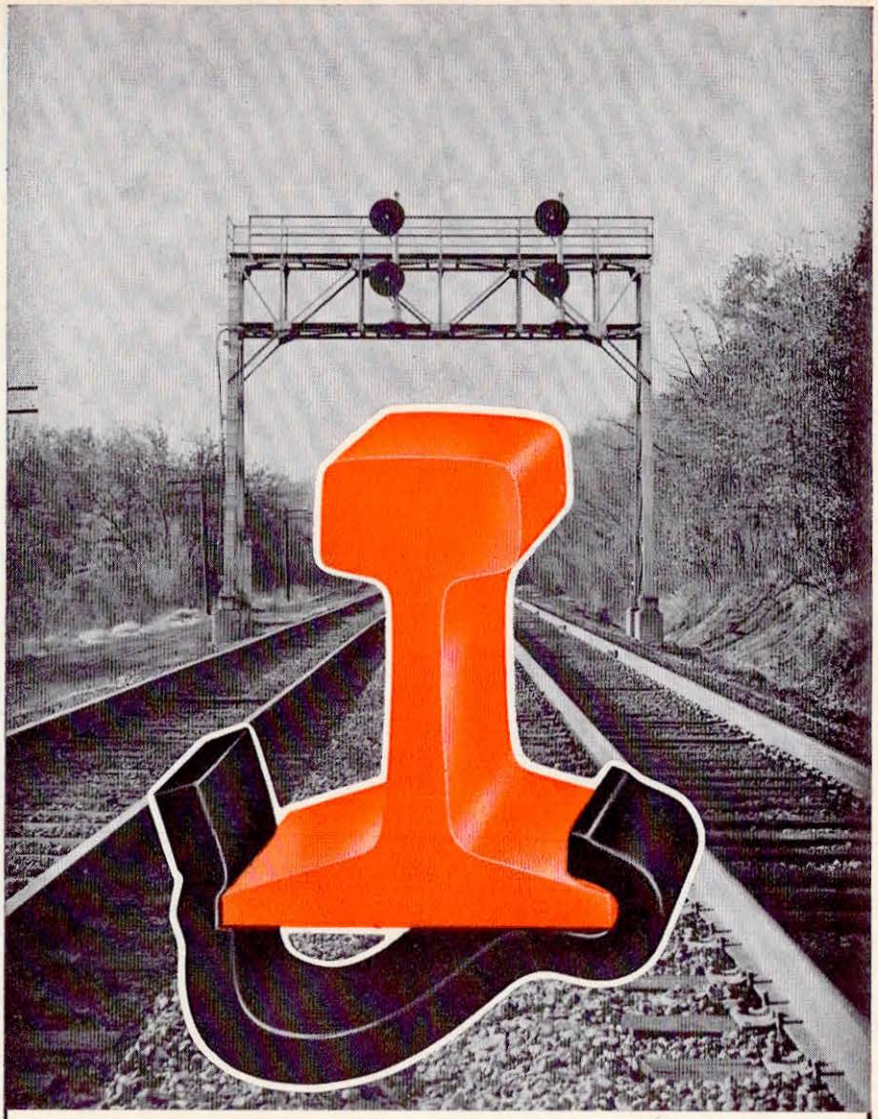
On the subject of track spikes a provision states that when the rail holding spikes on either the field or gauge side of one rail are missing from more than 6 of any 10 consecutive ties, "the condition shall be corrected or appropriate speed restriction placed to protect the movement of trains until the condition has been corrected."

The following specifications are given covering the use of various types of frogs:

"Rail-bound manganese steel, solid manganese steel and bolted rigid frogs are suitable where traffic is approximately equal on both sides of the frog.

"Spring-rail frogs are suitable where traffic is predominantly on the main track side of the frog.

"Self-guarded frogs are not suitable where speeds exceed 30 mph." ■



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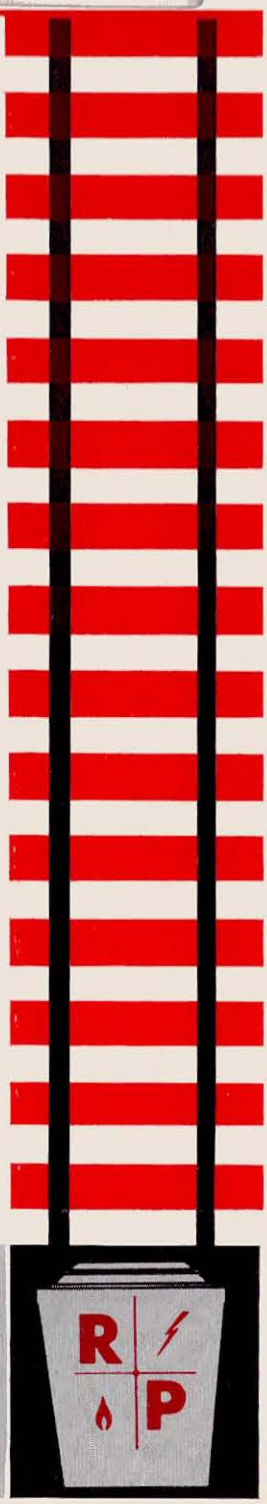

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ACI Systems

People

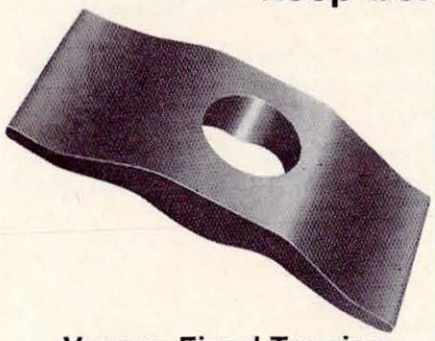
ASSOCIATION OF AMERICAN RAILROADS.—The following district managers, Car Service Division, appointed district transportation officers, with headquarters as before: **James E. Hathaway,** Chicago; **William D. Mahoney,** St. Louis; **Albert V. Mannery,** San Francisco; **John W. Swift,** Dallas; and **Robert L. Thacker,** Atlanta. **John F. Bishop,** manager of shipper relations, Washington, appointed district transportation officer, Minneapolis. **Douglas C. Keller,** transferred from Chicago to Pittsburgh as district transportation officer. **Paul A. Terrels,** transferred from Minneapolis to New York as district transportation officer. Assistant district transportation officers appointed: **John F. Forrester,** New York, and **Harold R. Heffernan,** Pittsburgh (former assistant district manager in those cities); **Marcel A. Bourgeault,** Minneapolis (former field secretary, Northwest Shippers Advisory Board); **Kenneth C. Brovald,** San Francisco, (former field secretary, Pacific Northwest Shippers Advisory Board); **Rudolph Jacklich,** Chicago (former executive secretary, Mid-West Shippers Advisory Board); **Andrew G. T. Moore, Jr.,** Atlanta (former field secretary, Southeast Shippers Advisory Board; **Robert O. Nelson,** Dallas (former field secretary, Southwest Shippers Advisory Board); and **Wilbur L. Saucerman,** St. Louis (former field secretary, Trans-Missouri-Kansas Shippers Advisory Board.

H. Gordon Randall, manager port traffic, Car Service Division, New York, named director of special equipment utilization, Washington, succeeding **Russell H. Buchanan,** who retired Nov. 1. **J. Francis Reilly,** assistant to manager of railroad relations, appointed assistant director of special equipment utilization. **Peter J. Ward,** assistant director of closed car utilization, appointed manager of shipper relations and **Miss Martha McManus,** field secretary, New England Shippers Advisory Board, will serve as assistant manager. **Herman P. Kappel,** manager, closed car section, named director of closed car utilization, and **George L. Constantine** transferred from San Francisco to become assistant director. **H. Donald Summers,** manager, open car section, appointed director of open car utilization, and **C. Vincent Fitzpatrick,** assistant to the manager, open car section, will be the assistant manager. **Herbert Schreiber,** assistant to the chairman for statistics, appointed manager of data control and analysis and **R. K. McCarthy,** assistant to the chairman for data systems, will be assistant manager.

Tight Bolts cost less than Loose Bolts

That's right. Loose bolts add up to costly, time-consuming, and just plain unnecessary repairs. Woodings eliminates these problems through rail fasteners that hold, and hold, and hold.

These Woodings Rail Fasteners keep bolts *TIGHT*



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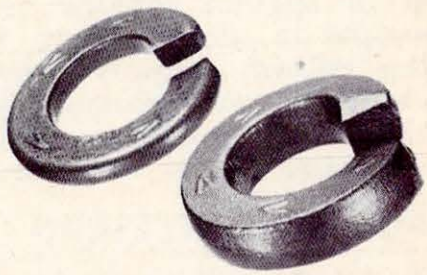
. . . providing equal and proper tension in all track bolts. The Verona Triflex Spring is the only practical device available to keep track bolts tight with equal calibrated tension in all bolts.



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Fast start for '71

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- **First definitive review of 1970, to bring 1971 into proper perspective.**
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The Railway Age

1971 YEARBOOK

Issue date: January 25, 1971.

Advertising closing date: January 11.

Robert M. Graziano, special representative, Bureau of Explosives, appointed director and chief inspector of the Bureau, succeeding **Thurber C. George,** who retired Nov. 1.

CANADIAN NATIONAL.—Charles A. Harris, director of public relations, Montreal, appointed vice president, public relations.

CHESAPEAKE & OHIO.—Robert E. Collins appointed assistant district sales manager, Buffalo, N. Y. He was formerly sales representative, Chatham, Ont., Canada.

DEPARTMENT OF TRANSPORTATION.—Ralph R. Mueller appointed deputy director, Office of Planning and Program Review, in the Office of the Secretary of Transportation. Mr. Mueller was formerly assistant division director for labor and manpower programs, Office of Management and Budget.

SUPPLY TRADE

W. H. Thompson, former vice president—operations and general manager, **Illinois Central,** appointed president and chief executive officer of the newly formed **ACI Systems Corp.,** 200 South Michigan Ave., Chicago. The company is offering a new generation of automatic transportation equipment identification scanners and ACI label-decoding processors. ACI Systems will provide to domestic and international transportation companies advanced computer-based operations and terminal control systems. Remote multiple scanners linked to these systems contribute continuing on-line information inputs. Both the scanners and control systems are being full-service leased.

O. L. Adkins, manager of OEM railroad sales, **Barco Division, Aeroquip Corp.,** Barrington, Ill., has been named railroad sales manager.

Herbert Hertzoff has been named national used trailer sales manager, **Strick Corp.,** Fairless Hills, Pa.

Angelo J. Buffone has been appointed service manager, railroad car operations, **ACF Industries,** New York, succeeding **George P. Rada,** retired after 25 years with the company. Mr. Buffone was formerly supervisor of field service for all ACF rail products.

George L. Romine has been elected a vice president, **Abex Corp.** Mr. Romine is group executive, Friction Products Group and president, S. K. Wellman Division, with headquarters at Cleveland.

Laurence W. Cantwell has been appointed manager of engineering, Railway Products Division, **Portec, Inc.,** Oak Brook, Ill. Mr. Cantwell was formerly division engineer, **Santa Fe.**

Richard M. Ettington has been elected chairman of the board, **MLW-Worthington Limited,** Montreal, succeeding **Edward C. Forbes,** recently appointed corporate vice president of **Studebaker-Worthington, Inc.** Mr. Ettington is a

LETTERS

View from the Street

Cincinnati, Ohio

To the Editor:

I want to congratulate you on your decision to have Karl Ziebarth offer his views to the industry periodically.

I have been one of those admirers of the work that both Karl Ziebarth and Pierre Bretey did on their annual report on railroads and have heard Mr. Ziebarth, personally. I feel that he has a message that we in the industry need and want.

I enjoyed his initial article in the Oct. 12, 1970, issue of Railway Age and I am looking forward to future material.

Henry E. Keniston
Vice President
Ortner Freight Car Co.

(Mr. Ziebarth's second View from the Street column appears on page 72 of this issue.—Editor)

Training tomorrow's transit managers

Bloomington, Ind.

To the Editor:

I thought your readers might be interested in a new program in urban mass transportation management which has been initated at the Indiana University School of Business. The program is predicated on the idea that one of the major stumbling blocks in urban transportation today is the shortage of managerial talent. The program is to help educate young men who are interested in careers in public transit, including bus, rapid transit, and commuter railway operations.

Transit management students will enroll as regular candidates for a B.S. in Business Administration at the IU School of Business, with a major in Transportation. In the academic program there will be, in addition to the usual degree requirements, stress on management, transportation economics, accounting, data processing, and labor relations.

During the regular academic year, transit management students will work part-time for the University's Campus Bus System. This will help provide background knowledge and practical experience in the problems of the day-to-day operations of a small transit property. In the summer, students will be expected to participate in a transit internship program with a major U. S. firm. Arrangements have already been made with several of the best managed firms. The purpose of the internship is to give the student a broader perspective of transit management, operations, and problems, as well as the advantage of practical experience.

George M. Smerk
Professor of Transportation
Indiana University

Oldest subscriber?

Baltimore

To the Editor:

After reading Mr. Herbert E. Bixler's letter in Railway Age (Sept. 14, p. 114), I became curious about when my subscription started. I have no absolute record, but it was either 1920 or 1921. [Mr. Bixler has been a subscriber since 1923.] I have retained an article from the Oct. 28, 1922, issue on "Development of Concrete in Railway Construction." I turned over most of my collection of railroad magazines to the Pratt Library here in Baltimore around 1939.

D. W. Kleinhans

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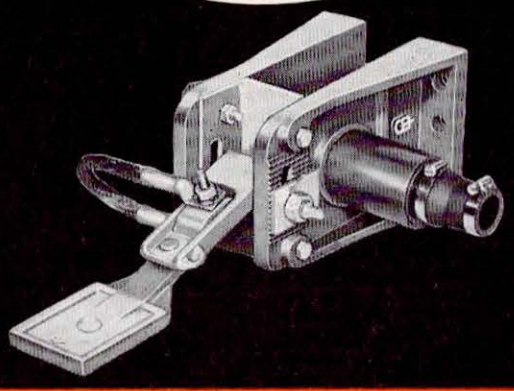

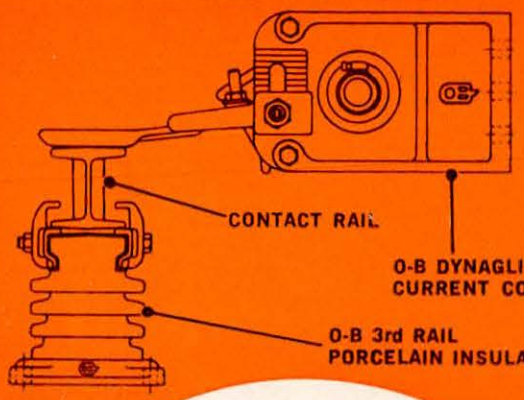

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Weighs less than 40 lbs. – just a fifth that of conventional heavyweights. Saves up to 600 deadweight pounds per car – a significant operational savings per year.

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Simplified design. Only five basic components. Only one moving part. Fast servicing, easy maintenance.

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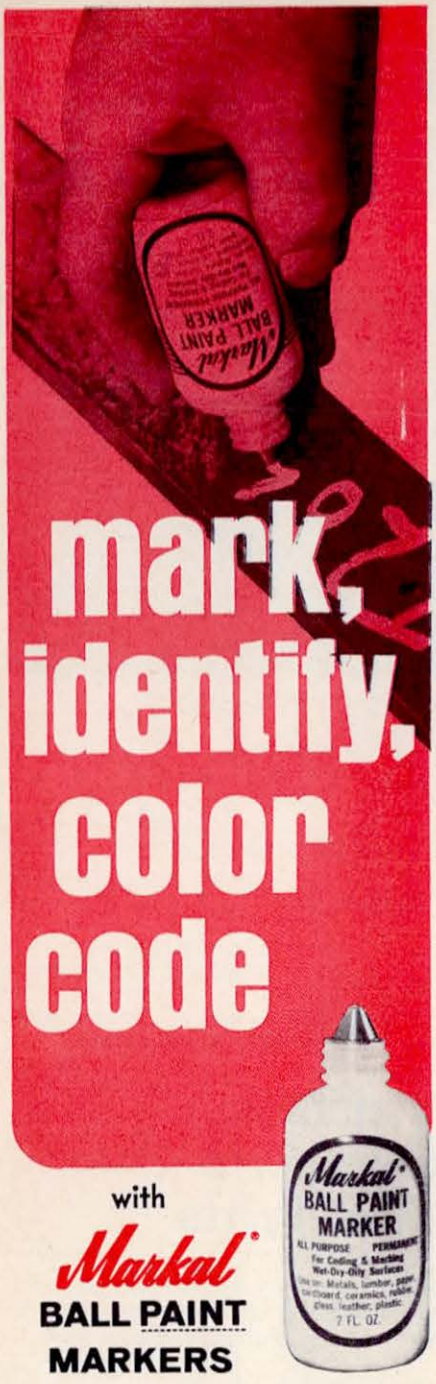

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group vice president of Studebaker-Worthington.

John N. Parker has been appointed manager, mechanical design, **MLW Industries,** division of **MLW-Worthington Limited. Norman J. Hochanadel** named manager, electrical design.

Arthur S. Feile, Jr., has been appointed an associate in the field of railroad design, **Chas. H. Sells Inc.,** Pleasantville, N.Y. Mr. Feile has been with the firm for 15 years and specialized in the grade crossing elimination field.

William M. Cole, executive vice president, has been elected president, container division, **Seatrain Lines, Inc.,** New York.

MCM Industries, Inc., Chicago, has acquired the **Rod Division** of **St. John Co.,** Chicago. Acquisition of the division, which manufactures galvanized metal meat hooks for use in railroad refrigerator cars, will diversify **MCM's Medalist Manufacturing Division's** steel fabrication to include products for the railroad industry.

TransporTrailer, Inc., Dayton, Ohio, has entered into a marketing agreement with the **Aerosupport Division** of the **Federal Sign & Signal Corp.,** Chicago, whereby the latter will provide marketing outlets through its network of offices in the U. S.

Wyn E. McCoy, chief engineer, Industrial Division, **Timken Co.,** Canton, Ohio, has been promoted to group manager—sales—industrial, railroad and steel. **C. H. West,** assistant chief engineer, Industrial Division, succeeds Mr. McCoy. **E. H. Hughes,** general manager—sales planning—domestic and international, has been promoted to group manager—marketing administration. **W. J. Chievitz,** assistant general manager—sales planning—domestic and international, succeeds Mr. Hughes. **P. F. Sack,** systems analyst—sales has been promoted to manager—systems—sales. **R. A. Young,** manager—sales control, Industrial Division, has been promoted to manager—corporate pricing.

W. B. Clinton has been appointed sales and service representative, **Railroad Accessories Corp.,** with headquarters in the St. Louis area. Mr. Clinton was formerly engineer signals and communications, **Detroit, Toledo & Ironton.**

Edward Gilberston has been appointed mid-western regional manager, **Transportation Division, The Binkley Co.,** with headquarters in Des Plaines, Ill.

John Helm has been promoted to Southeastern Regional manager, Transportation Division, Atlanta, Ga.

Ben A. Main, Jr. has been elected to the newly created position of executive vice president, operations, **Aeroquip Corp.** Mr. Main was formerly senior vice president of the technical group. In the Divisional Operations Group, **G. William Moody,** general manager, **Barco Division,** has been elected vice president.

DIVIDENDS DECLARED

CAROLINA, CLINCHFIELD & OHIO.—$1.25, quarterly, paid Oct. 15 to holders of record Oct. 2.

CHESAPEAKE & OHIO.—$1, quarterly, payable Dec. 21 to holders of record Dec. 1.

MISSOURI PACIFIC.—Class A, $1.25, quarterly, paid Sept. 30 to holders of record Sept. 18.

NORFOLK & WESTERN.—$1.25, quarterly, payable Dec. 10 to holders of record Nov. 9.

PITTSBURGH & WEST VIRGINIA.—12¢, quarterly, payable Dec. 28 to holders of record Dec. 1.

SANTA FE INDUSTRIES.—40¢, quarterly, payable Dec. 1 to holders of record Oct. 30.

H. K. Halvorsen has been named to the newly created position of director of engineering, **Page & Page, Inc.**

Clement F. Burnap has been named assistant to the vice president, marketing, **Paceco,** and assigned to international operations.

Palmer H. Swales has been named vice president and director, **Thomas K. Dyer, Inc.,** consulting engineers, Lexington, Mass. Mr. Swales was formerly vice president—operations and maintenance, **Bangor & Aroostook,** Bangor, Me. Dyer is consultant for relocation of railroad facilities on the Welland Canal Project, Welland, Ont.

Thomas A. Edison Industries, Primary Battery Division, **McGraw-Edison Co.,** Bloomfield, N.J., has changed its name to: **Edison Battery Division, McGraw Edison Co.**

TRANSIT

David N. Phillips, assistant general manager for administration, **Southeastern Pennsylvania Transportation Authority,** retired Oct. 1, after 44 years of service with SEPTA and its predecessors.

Col. Warren J. Higgins, executive director of planning and construction, **Massachusetts Bay Transportation Authority,** Boston, appointed director of operations, succeeding **Edwin M. Kahoe,** who resigned Oct. 23 to become director of operations planning, A.T.E. Management and Service, Inc., of Cincinnati, Ohio, with headquarters in Baltimore. **Robert G. Davidson,** executive director, Metropolitan Area Planning Council, named director of planning and construction, MBTA.

Carl F. Ramsey, manager of maintenance, **Cleveland Transit System,** will retire Feb. 1. He will leave his post Nov. 1 on accumulated vacation.

OBITUARY

Orland E. Schultz, who retired as chairman, **Traffic Executive Association—Eastern Railroads,** New York, on Oct. 31, 1963, died Oct. 21 at Dunedin, Fla.

Charles Augustus Sturtevant, 60, assistant vice president—rates and divisions, **Norfolk Southern,** Raleigh, N. C., died Oct. 9.

Computers: What's the optimum usage?

For managers with an eye to making the most of computer systems, there was a lot of advice available at the recent annual meeting of the AAR Data Systems Division. Some came from outside the industry, some from the inside.

From the outside came R. P. Neuschel of McKinsey & Co., Inc., with a six-point check-list which indicated that management should master the computer on high-payout uses, balance its selection of computer applications, increase the involvement of key line managers, pre-evaluate application feasibility, cultivate a tough realism as to what can be done and when, and "bring the computer and decision-maker together where, with the use of relatively simple cause-and-effect models, the decision-maker can quickly determine the consequences of alternative courses of action."

Southern's president, W. Graham Claytor, Jr., got to specifics—with the observation that the '70s will be the "decade of terminal-oriented realtime systems. . . ."

Terminals, Claytor said, should be put "where the day-to-day action is. . . . to help the man on the front-line of transportation do a better job." He called for refinements in simulation techniques—but he also noted that "it takes skilled operating people using your model effectively to turn this into the most useful reality."

In the '70s, Claytor sees great improvement in data bases and greater cooperation among railroads in data capture and data exchange: "For example, the project already under way to pre-code repetitive shipments with a single number that would allow quick and accurate computer generation of the data that is always the same on such shipments seems to me an idea of tremendous potential."

Claytor added this: "Railroads should be able to work out an automatic, computer-to-computer exchange of common data for their own benefit and that of customers. Expanded interchange of data with shippers . . . can help improve our service and eliminate delays caused by lack of timely information. Centralized waybilling may reduce our need for recapturing waybill information later for the computer.

"Data interchanges can develop between different modes of transportation, streamlining the movement of containers and other intermodal shipments. There is a possibility that direct data exchange will reduce the mountains of paperwork we exchange with regulatory agencies."

Casey Jones never had it so good. No wonder Casey was in such a hurry! His only alternative was an unsanitary, unpleasant railroad toilet. Now there's a sensible, simple, low-cost replacement for those old-fashioned units — the radically different Monogram Model 12800 NEW-matic flushing toilet. Easy to install — it's completely self-contained and runs on your existing air system. Needs no electricity, no holding tank, no separate water supply. Easy to maintain — needs only monthly servicing. Immune to freezing temps and has only ONE moving part for years of trouble free service. Odorless, silent, clean. Send today for more information on the dependable NEW-matic — a sure, economical way to solve your sanitation problems.

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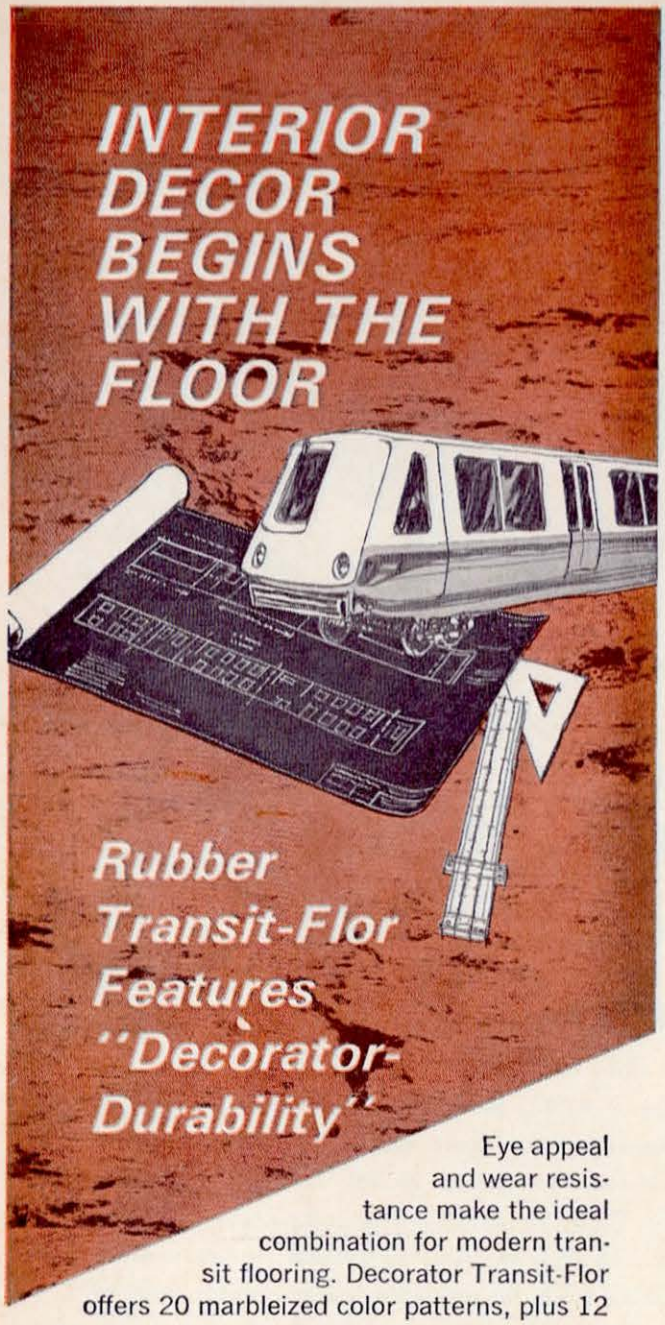

Eye appeal and wear resistance make the ideal combination for modern transit flooring. Decorator Transit-Flor offers 20 marbleized color patterns, plus 12 terrazzo styles, to blend or contrast in new or existing interiors. Low-maintenance rubber stands up to grueling wear, foul weather . . . and even supplies best resistance to cigarette scorch. Rubber's natural resilience provides underfoot safety . . . in double-grooved rib or smooth surface flooring. Step treads come in blending or matching colors.

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BOOKSHELF

THE HIAWATHA STORY by Jim Scribbins (Kalmbach Publishing Co., Milwaukee, Wis., $17). This is not a saga of red men, but ultimately becomes one of red ink. Highway competition was making inroads on passenger travel in the corridor between Chicago and Twin Cities during the Great Depression until the three major passenger carriers—Burlington, Chicago & North Western and Milwaukee Road—launched their competitive high-speed services. Rail patronage responded to the new equipment and operating concepts—continuing at high levels until the postwar superhighway and airway put even the finest of passenger trains into decline in the 1950s.

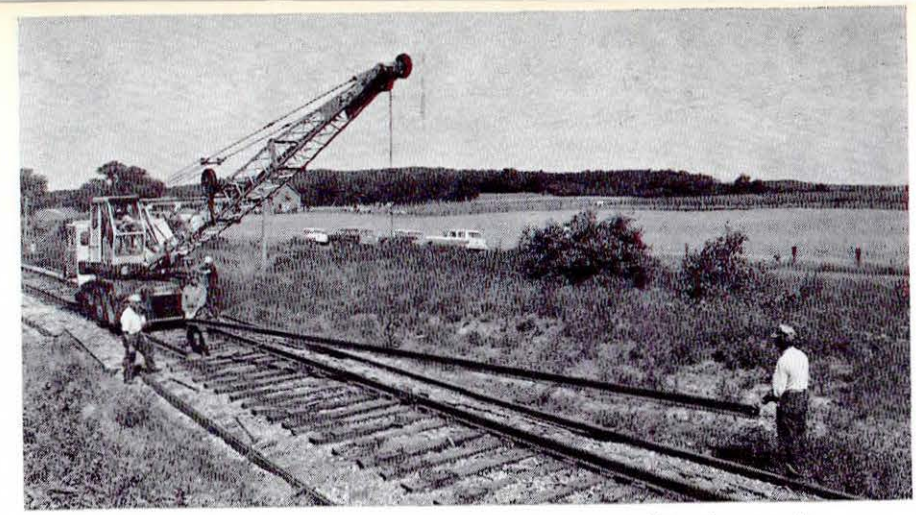
Milwaukee chose "Hiawatha" for the lightweight, streamlined trains it put in service in 1935 and ultimately similar high-speed day trains on its major routes got the same designation—North Woods Hiawatha, Chippewa Hiawatha, and Midwest Hiawatha. Milwaukee introduced the long-haul Olympian Hiawatha between Chicago and Seattle/Tacoma, destined to be about the shortest lived of transcontinental streamliners. From Milwaukee Road's own shops came most of the equipment for these trains, initially designed and built under the watchful eye of K. F. Nystrom of the road's mechanical department.

The book reports the revolution in locomotives which accompanied the development of the Hiawatha and the evolution which marked their continued operation. Special steam locomotives, production diesels and long-haul electrics gave these trains the distinction of using more types of locomotives than any other streamliner. At the beginning of 1970 the double daily Hiawatha service between Chicago and Minneapolis was cut back so that the Morning "Hi" is now the sole survivor of a once vast passenger service. The 250-page book is profusely illustrated; the author has been a Milwaukee employee since 1948 and brings a background of information probably unavailable to most outsiders.

GHOST RAILROADS OF INDIANA by Elmer G. Sulzer (Vane A. Jones Co., Indianapolis, Ind., $15). In addition to the trunklines which converge on Chicago through the Hoosier State, Indiana has also had a network of shortline railroads and interurbans. The author, a retired college professor, has gathered ten chapters and over 260 pages of history and human interest on the short lines of Indiana. Most have long since disappeared. The volume contains several color plates, hundreds of photographs and drawings, and some serious typographical shortcomings.

TRAINS ALL-COLOR GUIDE by John Day (Grosset & Dunlap, New York, $3.95). This is one of a series of Grosset All-Color Guides; it gives a lively account of railroading from the earliest construction and locomotives to the latest experiments with monorails. In the 160 pages are many detailed color illustrations of trains from all over the world. The author believes railroads will survive, even if they are so transformed as to be scarcely recognizable.

ELECTRONIC ON THE RAILS by R. K. Allen (Railway Locomotives and Cars, 350 Broadway, New York 10013, $3. per set). Between 1964 and 1970 a series of articles on the application of solid-state devices in car and locomotive control and power systems were published in Railway Age's associated technical monthly. The author has extensive experience with General Electric's advanced transportation technology and many of these concepts are presented in easily understood form. All 22 articles are reprinted in three 24-page booklets.



ONE OF THE BUSIEST MACHINES on the GB&W is the on/off track crane. It handles ditching, bank-widening, culvert and rail laying, among other things.

Maintenance dollars go far on the GB&W

The railroad sets fixed-property standards it can live with and keeps to them with a small force and selected equipment.

By R. E. DOVE, Associate Editor

Much has been written about how large railroads maintain their fixed properties. Here is how a small railroad—the Green Bay & Western—does the work.

The GB&W is operated under three divisions (Kewaunee, New London and Whitehall). However, the road's engineering and maintenance is handled from headquarters in Green Bay, Wis., on a system basis.

● **Maintenance force is small.** The GB&W's field maintenance organization consists of seven maintenance crews, one bridge and building crew and three signal maintainers. In summer, the track force is augmented by two extra gangs of 18 to 25 men each.

GB&W President H. Weldon McGee feels his road was fortunate when it looked ahead and anticipated a union desire for stable employment. GB&W began negotiations with the union before most other railroads did. The GB&W explained to the union the need for keeping the work force low enough to let the railroad survive, as well as the need, in order to provide stable employment, for some overlap of work duties. On the other hand, the railroad agreed to make working conditions the best possible. As a result, an agreement was worked out that has proved mutually beneficial to the men and the railroad.

● **Basic force.** Each track-maintenance crew is comprised of a foreman and two men, except at two terminals where a foreman and five men each are employed. In summer, the track- maintenance crews are swelled to a foreman and 10 men each. These crews handle all track maintenance, as well as car cleaning, just as the section forces did in the past.

The men are headquartered in the larger towns. The railroad got rid of its motor cars and has provided Hy-Rail pick-up trucks for the transportation of the men. It has endeavored to mechanize as many operations as it could with its limited budget.

The two extra gangs take care of rail-laying, out-of-face surfacing and heavy tie-renewal work. They are housed in mobile trailers sleeping six men each. In addition, each extra gang has a box car for its tools and equipment. The trailers are moved by railroad-owned trucks from town to town as the work progresses. The tool car is moved by freight trains.

The basic bridge and building force consists of a foreman and two bridgemen. This crew is responsible for maintaining all wood bridges and buildings, doing all painting and for making minor repairs to the steel structures. The road has 59 steel bridges totaling 4,565 feet, 41 timber trestles totaling 4,802 feet and 30 culverts totaling 365 feet. One of the latter is a Multi-Plate culvert, 22 feet in diameter, the largest in the state of Wisconsin. When it is necessary to have a larger force to accomplish the B&B work, the crew is expanded by commandeering some track laborers.

The B&B crew has no assigned headquarters. It is housed in trailers that are moved as required by a Hy-Rail truck. It is assigned a tool and supply car, moved over the rails.

McGee points out that the B&B force is too small and not equipped to handle major repairs to the steel structures or the ferry slips at Kewaunee. When such work is required, the road contracts for both the design and repair work with the Wisconsin Steel & Iron Co. Since the road has disposed of its pile driver to avoid the heavy cost of upgrading and to save work-train service, pile-driving work is contracted locally.

The basic signal force is comprised of three signal maintainers who take care of all signal and communication work and all electrical work.

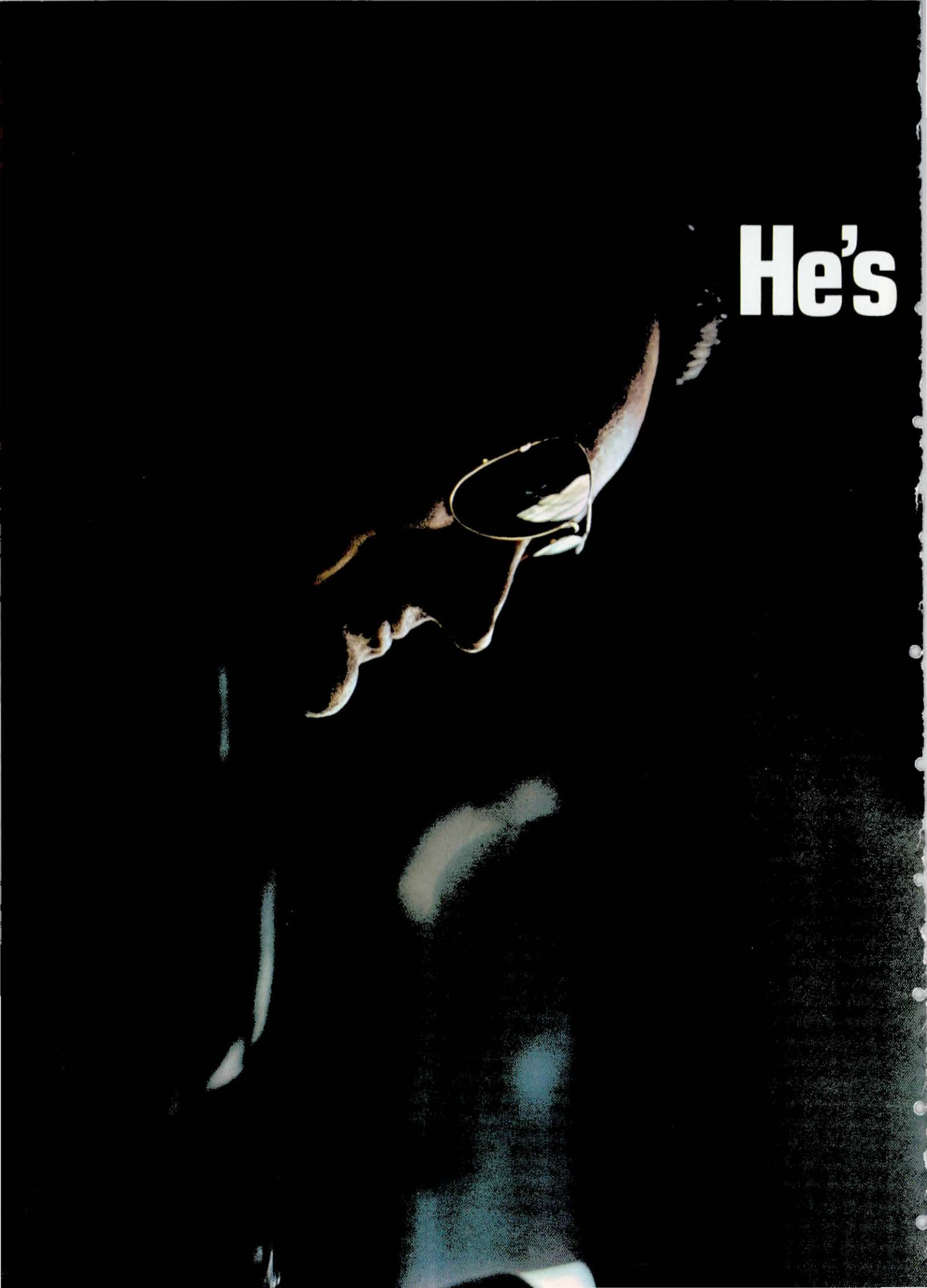
● **Small roads must cut corners.** Tie renewals on the GB&W run from 7,000 to 8,000 per year. This number may have to be increased soon, explains McGee, because the road acquired a large number of treated pine ties from Texas in 1936 and these have about reached the end of their service life. To hold renewal costs down, the road has been purchasing about half its annual requirements in treated ties, 9 feet long, of the industrial type, realizing a saving of about 50% over the cost of the larger ties. The remainder of its requirements are good secondhand ties, purchased at half the cost of new ties, from line abandonments on other roads. These ties have been giving a life of 18 to 20 years.

On new track construction, the road has been obtaining some untreated, unadzed and unbored white oak ties, a species native to Wisconsin, at a saving over the cost of treated ties. The white oak ties are interspersed with treated red oak ties so that, when they begin to fail, all the ties won't require renewal at the same time.

It is the road's practice to plate all its ties. Here, again, it effects a saving by purchasing second-hand plates at a cost of 41 cents each. These, purchased on the open market, include large and small plates, mostly single shoulder. The larger plates are used on the main track, the smaller ones in the yards and sidings.

Another way the GB&W extends its maintenance dollar is by adopting the 90-lb rail section, instead of the heavier sections, as standard. This it feels it can do because train speeds are limited to 45 mph. So far, the heavier car-axle loads have not caused undue rail breakage. But, the railroad, taking no chances, has a Sperry detector car operate over its entire line each year to seek internal defects.

Ballast is no problem on the GB&W. The road contracts for a good grade of crushed and washed gravel, 90% stone and 10% sand. McGee says this drains extremely well, with no subsequent ce-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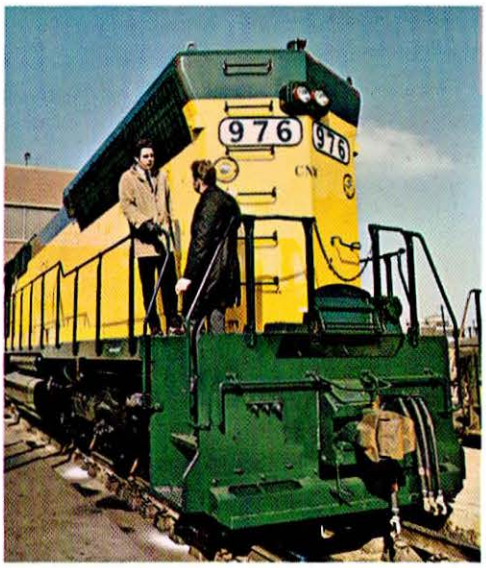

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La Grange, Illinois

menting. This material is obtained from glacial deposits on the line for $1.85 per cu yd, f.o.b. The main track has been ballasted at least twice since McGee came to the road. About half of the line is being reballasted for the third time.

● **Eliminates work trains.** For a small road, the GB&W has quite an array of work equipment. Such equipment, selected carefully, says McGee, is tailored to the needs of a small road, keeping in mind the elimination of work-train service.

For example, for a rail-relaying project, two or three cars of rail are spotted at the work site by the last train to be passed before the gang takes over the track. The bulldozer is then used to pull a car of rail with a cable (no drawbars are used), while a Schield Bantam crane on the track unloads the rails. The crane is also used for setting out the old rail, laying the new and picking up the displaced rail. This crane, says McGee, is the busiest machine on the railroad. It is started out in spring for ditching, bank-widening and culvert-cleaning work. Then, in the summer, it is used for rail laying and all heavy lifting for bridge work. When engaged in bank-restoration work, a three-way dump truck is used in conjunction with the crane, so no work-train service is required.

Ballast unloading is one chore for which work-train service is required. Doing this, McGee says, the men see to it that, while unloading the ballast from the Hart ballast cars, the ballast equalizing operation is minimized. A Fairmont discing machine is used for necessary equalizing.

The M/W work equipment is repaired during the winter at the road's Wisconsin Rapids shop. For big units, such as tampers, the unit change-out method of repair is used. Any equipment that runs on the highways, however, including all Hy-Rail-equipped machines, except the Schield Bantam crane, is repaired at Green Bay by the Kewaunee, Green Bay & Winona Transport Co., which owns the Hy-Rail equipment and leases it to the GB&W.

● **Takes winters in stride.** Snow is not too much of a problem on his road, says McGee. Most cuts have been widened so they rarely clog with snow, he explains. About every two years, a severe storm requires use of a Jordan spreader for opening cuts. In yards, snow-removal work usually is done by contractors.

Winter is when the track-maintenance crews cut brush. Each crew is furnished with a pack-type Brushmaster machine for this purpose. Just before this work, in late August and in September, the road uses its homemade spray outfit for applying a brush-killing chemical. This outfit, also used for applying a weed-killing spray in May, is mounted on a push car towed by a Hy-Rail truck. It consists of a chemical mixing tank, a high-pressure pump and spray hoses.

● **Radio is big help.** "We'd be lost without our two-way radio," says McGee. "We have base stations at Kewaunee, Green Bay, Manawa, Stevens Point, Wisconsin Rapids, Merrillan, Arcadia and Winona. This gives us complete coverage. All our Hy-Rail units are equipped with radio so that our gangs can communicate with oncoming trains and arrange their work accordingly."

Summing up, McGee says, "We are at a point on this railroad where we have come through a long period of rehabilitation. We have set our train speed at 45 mph. We have good ballast and 90-lb rail and we aim to maintain our railroad at this standard.

"We have our own machinery and labor force to accomplish this. Most of our ballasting is routine and not extra maintenance. We will try to improve our grades a bit, but not extensively.

"Our bridges are all in good condition. Last year we replaced one bridge with a steel span. We have no problems with our bridges—only minor repairs." ■

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Circle 35 on coupon page 35

RAILS IN TRANSIT

DOT loan to help D.C. Metro

DOT Secretary John A. Volpe, so far as Washington, D.C., residents are concerned, headed off the bad guys at the pass by offering a $57-million emergency loan to the city's beleagured Metro system.

Metro on Oct. 15 voted to apply for the loan.

The "bad guys" are the pro-freeway advocates who sit on the House District Appropriations Subcommittee and are blocking $34.2 million in Metro financing funds until the D.C. Government proceeds with freeway construction it so far has refused to approve.

Without the emergency loan, Metro would have run out of money by the end of October.

It was the second time DOT, through the Urban Mass Transportation Administration, made a direct loan to a transit system. Philadelphia's SEPTA received a loan instead of a grant in the other instance.

There is no more controversial local issue in Washington than the freeway/subway impasse, which has a lengthy history. The root of the matter is that the D.C. Government is totally dependent on funds appropriated by Congress for everything from schools to garbage collection. Also, the dispute extends to differing House and Senate views on how much latitude the District should have on road projects.

DOT Secretary Volpe made the loan offer, he said, with the full approval of President Nixon. DOT, Metro, the Administration, and the D.C. Government all hope the impasse can be resolved in the new Congress meeting in January, in which three staunch highway advocates will either be absent or shifted to other committee posts; namely, Rep. George H. Fallon (D-Md.), who was defeated for renomination; Rep. William C. Cramer (R-Fla.), who retired to run for the U.S. Senate from Florida, and Rep. William H. Natcher (D-Ky.), who actually blocked the D.C. Metro appropriation and who may shift to head a House Appropriations Subcommittee.

CLEVELAND

Results from a study of the Cleveland Transit Authority's rail line to Hopkins Airport, the only U.S. airport rapid transit link now in operation (Brussels and Tokyo have such service), are "heartening," announced DOT. The study reveals that the average air passenger using the service is male (80.1%), has an income in excess of $15,000 per year (61.2%), and travels alone (72.3%) on a business trip (58.6%).

"This is precisely the kind of person that many transit critics claimed wouldn't ride a public conveyance," noted DOT.

"Another pessimistic theory that went down the drain," said DOT, "was that people with baggage wouldn't use rapid transit." The survey shows 62% of riders checked at least one bag on their flights. Also, an average of 3,600 passengers a day use the airport rail rapid line, about triple the original estimate. Of all riders, 57.6% are airport-bound passengers.

WASHINGTON

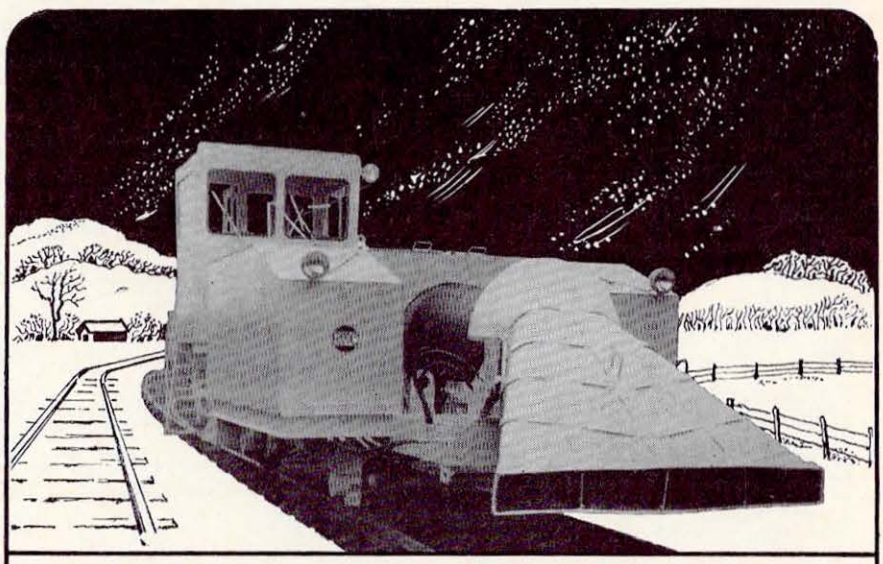
FRA has awarded a $142,932 contract to the Washington Metropolitan Area Transit Authority to conduct a 6-month feasibility study of a rail transit line that would run in the median strip of the road serving Dulles International Airport, connecting with WMATA's Metro system.

HOUSTON

DOT has awarded a $516,000 grant to the City of Houston for a comprehensive study of a "balanced" public transportation system for this metropolitan area. The study will include a long-range rapid transit plan involving six corridors. They will be examined for rapid transit potential, engineering and design, environmental impact, and cost benefits to determine where rail rapid would be feasible.

MONTREAL

A plan to extend the Montreal Metro system by some 35 miles, at a cost of $400 million, has been presented to the Montreal Urban Community Council. If a commitment for financial aid is received from the provincial government of Quebec, tenders could be called for in the spring of 1971.



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RMC Snow Blowers

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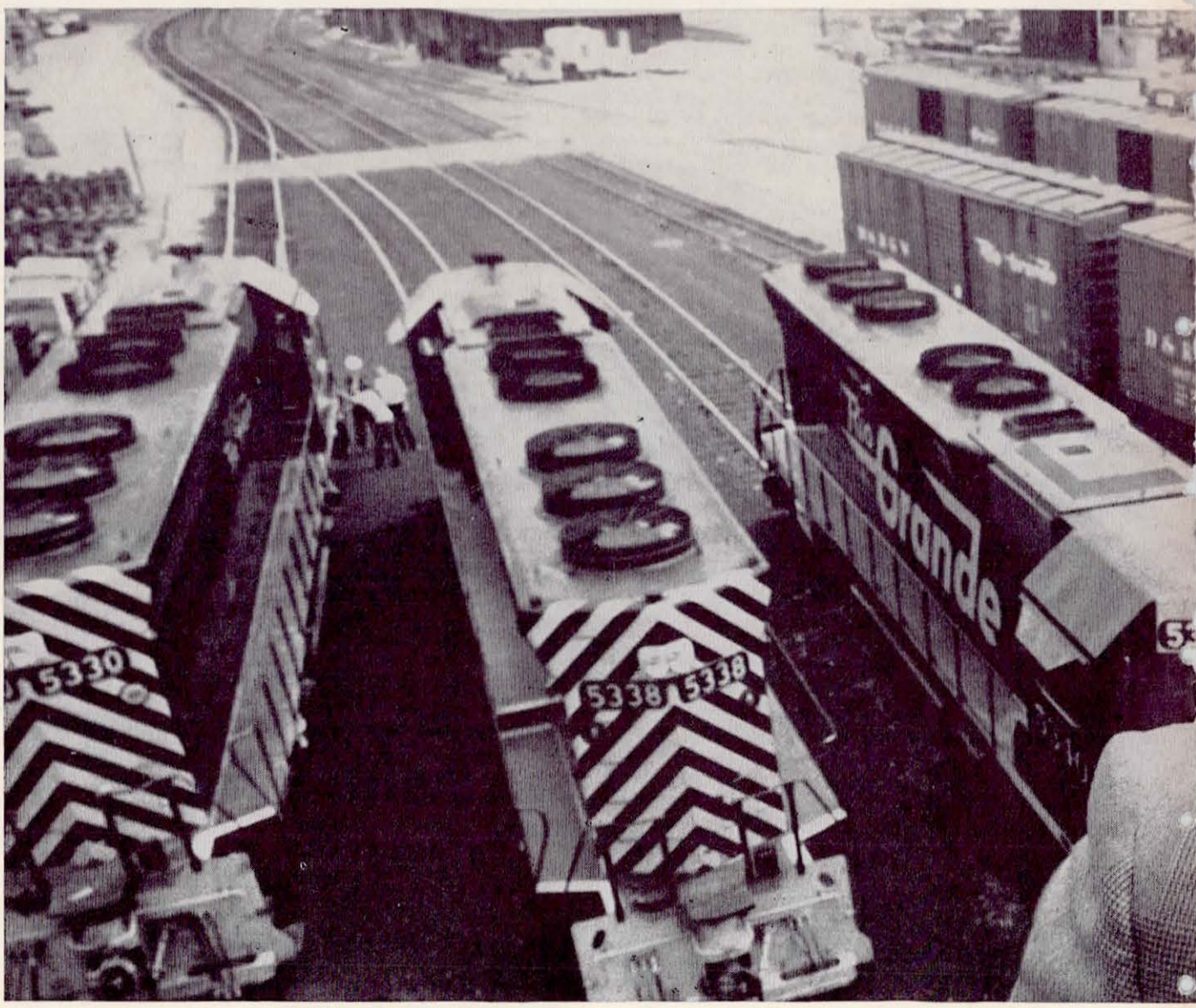
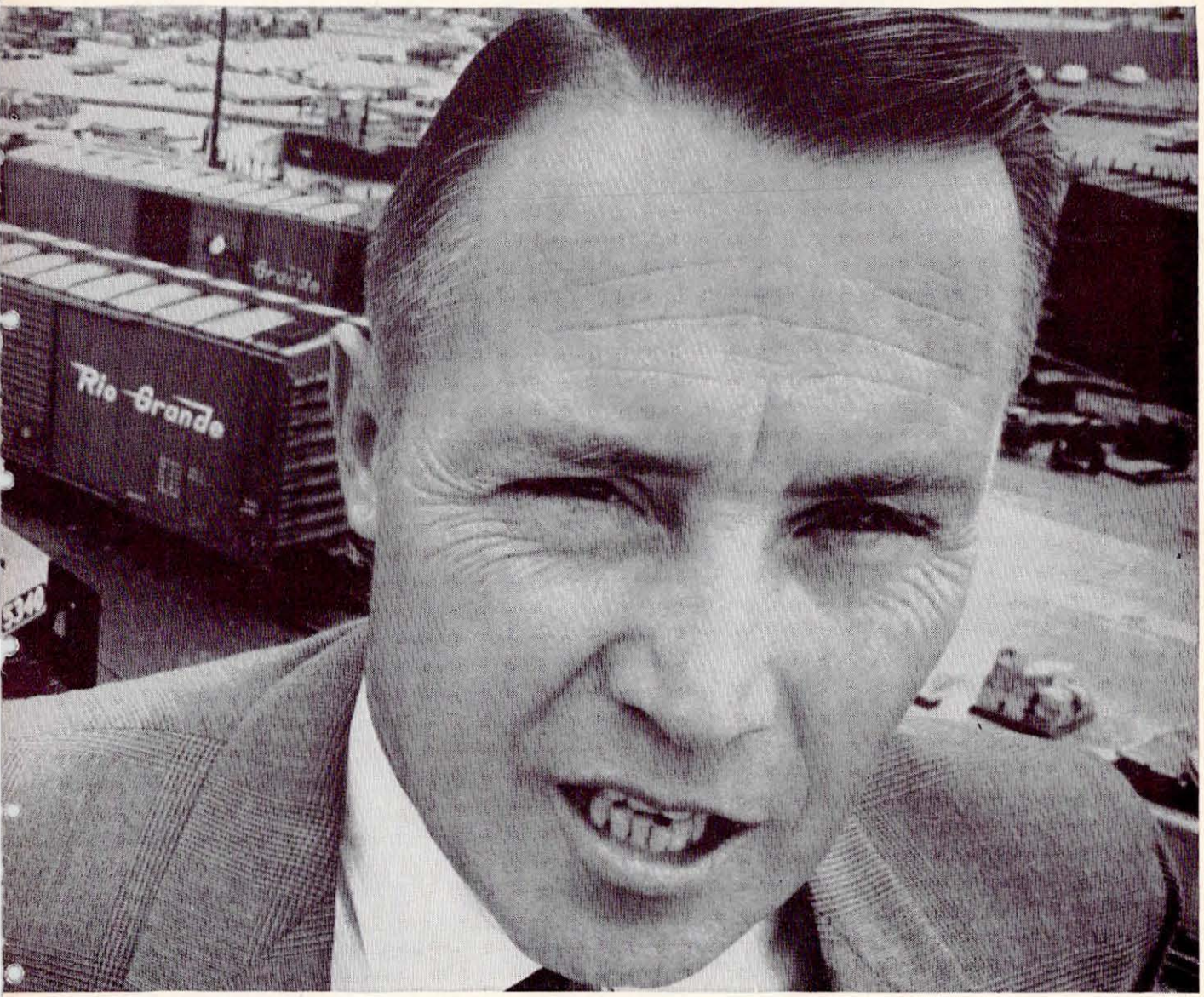


SHELL

MEMBER RPI



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*There must be a reason.

MEMBER RPI

Circle 28 on coupon page 63

PITTSBURGH

The Westinghouse Air Brake Co. estimates that about $20 billion will be spent on transit systems in the 1970's, and that a good chunk of this money will go for smaller "secondary systems."

With an eye on this latter portion of the market, WABCO has formed a Monorail Division "which will seek contracts for design, construction and installation of small, fixed-guideway transit systems." Key element of the new division will be Universal Design, Ltd., Wildwood, N.J., a firm which WABCO acquired earlier this year.

Keith Bunnel, vice president of the parent firm's Transportation Group, said he believes the UD system is a forerunner of the coming commercial application of monorails in urban centers, airports and other high-density areas.

The WABCO monorail is a rubber-tired, lightweight, electrically-propelled vehicle which operates on either concrete or steel track. According to the firm, the monorail may be elevated, underground or on the surface. There are two basic vehicle lines, with four kinds of rolling stock available. The prototype car for airport or shopping-center use caries 50 passengers.

ATLANTA

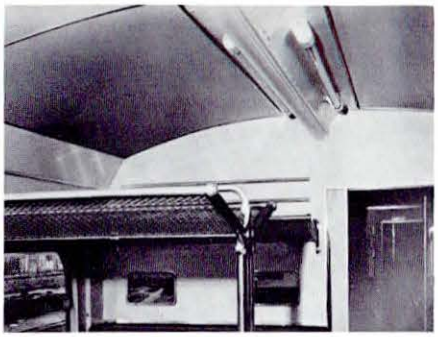
The six railroads serving Atlanta have told the Metropolitan Atlanta Rapid Transit Authority that operation of a rapid transit system over rail tracks is unfeasible and that a separate rail rapid system is the only satisfactory alternative.

WASHINGTON

Metro system officials opened bids for their first aerial station and found the lowest bid to be 46% above their official estimate of the project's cost. The Metro estimate was $8,744,770.75. The low bid, for $12,778,412, came from the joint venture of Gordon H. Ball, Inc., and the J. F. Shea Co., Danville, Calif. Metro officials declined to speculate on whether the low bid would be accepted. About $108 million of Metro construction is now in progress. Only one set of bids, so far, has been rejected by the system. This occurred in August when a low bid was received that was 57% above Metro's official estimate of $4 million for replacement of five miles of rail track and yard facilities in Washington's Union Station.

—Reid Beddow

New Products Report



Lining material (RA-1)

Walls in corridors and passenger compartments of coaches and buffet cars shopped by the Dutch Railways are being redecorated with a vinyl wall covering surfaced with a thin layer of Tedlar PVF film from which stubborn stains, such as the yellowing caused by tobacco smoke, can easily be removed. Doors between coaches and the interior sides of exit doors are also being covered with the material. Stains stay on the wall covering's surface and do not penetrate into the vinyl. Because of the chemical inertness of the film, virtually any strong cleaning agent can be used for the cleaning operation. The high mechanical strength of the film, one of the first applications of which in American mass transportation has been in the Boeing 747 jet, also gives added protection against abrasion. *E.I. du Pont de Nemours & Co.*

Gate wrench (RA-2)

The Model 2000 torque multiplier gate wrench may be used on all types of covered hopper cars with rack and pinion sliding gates. It is said to quickly open the toughest such slide. Its basic component is the gear reduction unit. A manual pull of 200 lb on a 2-ft handle produces one ton of torque on the gate shaft. The wrench adaptor is mounted on the drive pinion of the sliding gate. The torque multiplier is then connected to the drive adaptor and the reacting handle anchored against rotation by contact with the ground. The ratchet adaptor and handle is then inserted in the input of the torque multiplier. *Martin Engineering Co.*

Horsepower indicator (RA-3)

The 12- x 10- x 6-in. electronic Powerfinder is said to provide continuous indication of the horsepower hours and efficiency developed by a diesel electric or an electric locomotive. The instrument, designed to railroad specifications, mounts permanently in the cab, on the bulkhead or control stand of a locomotive. It provides also a continuous record of the number of horsepower hours (a measure of utilization) and the condition and efficiency of operation throughout. Installations of the instrument, which is said to measure engine horsepower from 0-6000 hp continuously, are now being made on a number of railroads and a major rapid transit system, the manufacturer says. *Audn Corp.*

Floor sealer (RA-4)

A heavy-duty epoxy material has been adapted for floor-sealing purposes. Each of the manufacturer's sealer kits contains equal quantities of epoxy resin and hardener for mixing together at the time of application. The sealer is easily applied by a push broom or a long-handled paint roller. The clear epoxy finish, for wood or concrete floors, increases floor life. It will withstand tremendous abrasion, even from steel-

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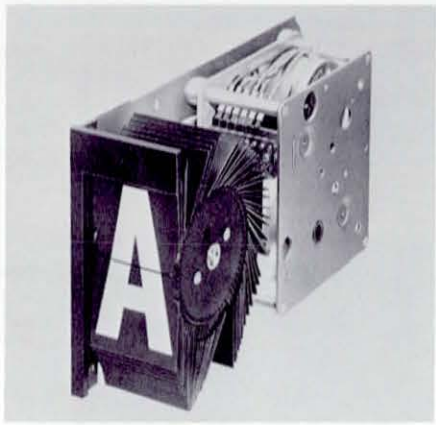
wheel trucking, and prevents dusting of concrete floors. A one-gallon trial quantity is available for $11.45. *Ranco Industrial Products Corp.*



Display modules (RA-5)

A new line of alphanumeric split flap modules are for information display systems. Continuous code feedback provides the operator with a constant knowledge of the message on display. The line includes two types of modules, single character and wide flap units. As many as 64 flaps are available in each module. Characters in all modules can be either 2½ in. or 4 in. tall. Wide flap modules are available in 4-, 6-, 12-, 18-, 24- and 30-inch widths.

A choice of either ASCII-coded input or select code input is available. Input for these systems can be taken from teletypewriter, tape recorder, computer TX/RX or simply keyboard. *Conrac Corp.*

Optical reader (RA-6)

A new optical page-reader or journal tape-reading system, the Farrington OCR (Optical Character Reader), reads information either typed or printed, edits and formats it, and then produces a magnetic tape output of digital data. The Farrington 3030 page reader has a reading speed of 400 characters per second. The 3030 system is a general purpose digital mini-computer (Varian 620/i) that has a memory storage of 4,096 words of 16-bit length, expandable to 32,768. *Varian Data Machines.*

New computer (RA-7)

IBM's recently announced System/370 Model 145 offers new levels of performance, reliability and economy to users of medium-scale computers. Model 145 is the first IBM computer using a main memory made entirely of monolithic circuits. To store its data and instructions, Model 145 uses silicon memory chips rather than magnetic core technology. More than 1,400 microscopic circuit elements are etched onto each one-eighth-inch-square chip.

Monthly rental for typical configurations of Model 145 will range from about $14,950 (with 112,000 characters of main memory), to $37,330 (512,000 characters), with purchase prices ranging from about $705,775 to $1,783,000. *International Business Machines Corp.*

NEW LITERATURE

LINING SYSTEMS. A phamphlet describing two lining systems for railroad cars and stationary storage vessels has been issued by the Coatings & Resins Division of PPG Industries. The brochure explains the advantages of the company's multiple-coat Polyclutch polyamide epoxy and its one-coat Polyclutch amine epoxy lining systems. (NL-1)

PRESSURE LUBRICANTS. A new four-page bulletin by the Brooks Oil Co. describes extreme pressure lubricants for critically severe machinery maintenance. The firm's extreme pressure lubricants are extensively used in various industries, including railroads, mines and tire plants. (NL-2)

BATTERY MAINTENANCE. A 12-page-pocket-size installation, operation and maintenance handbook for nickel cadmium batteries for railroad signal service has been issued by NIFE Inc. (NL-3)

TRACKWORK. A new four-page, two color illustrated folder describes the full range of track materials and accessories available from the L.B. Foster Co. (NL-4)

RAIL DEFECTS. "Significance of a detection of defects in rails," a paper by P.C. Johnson and S. Wise of the Engineering Research Section, Railway Technical Center, Wilmorton, England, is available as Reprint 922 from Krautkramer Ultrasonics Inc. (NL-5)

CONTAINERS. Owens-Illinois Inc.'s Forest Products Division has released the seventh in its series of booklets about corrugated containers. The booklet gives data and packaging tips for shipping by rail. (NL-6)

RAILCARS. Whiting Corp. has issued a new Trackmobile Bulletin T-148. Five models are described in full color, with brief specifications, table of performance and dimensions. Trackmobile is a railcar moving vehicle with road-to-rail convertibility and hydraulic power which transfers the machine's weight to increase tractive power. (NL-7)

CONTAINER HANDLER. A six-page bulletin describes the Silent Hoist & Crane Co.'s Giant Liftruk container handler. Liftruk handles both 8x8x20 ft and 8x8x40 ft containers. (NL-8)

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Market Outlook

CARLOADINGS

Loadings of revenue freight in the week ended Oct. 24 totaled 556,831 cars. This was an increase of 2.2%, compared with the previous week; a decrease of 7.4%, compared with the corresponding week last year. Ton-miles generated by carloadings in the week ended Oct. 24 are estimated at 15.4 billion, a decrease of 5.5% below the corresponding week of 1969.

REVENUE FREIGHT CARLOADINGS

Commodity	Oct. 24 week	Oct. 17 week
Grain	35,297	31,914
Farm products	24,020	21,954
Metallic ores	45,187	44,334
Coal	109,432	106,426
Crushed stone, gravel & Sand	31,690	32,886
Nonmetallic minerals	9,460	10,091
Grain mill products	20,842	20,071
Food & kindred products	26,577	25,892
Primary forest products	25,206	24,969
Lumber & wood products (except furniture)	14,719	15,078
Pulp, paper & allied products	23,202	22,621
Chemicals & allied products	26,061	26,079
Petroleum products	10,172	10,435
Stone, clay & glass products	20,092	19,999
Coke	8,254	8,198
Metals & products	23,074	22,075
Motor vehicles & equipment	12,910	12,630
Waste & scrap materials	14,234	14,241
Forwarder & shipper assn. traffic	6,852	6,579
All other carloads	68,908	67,861
LCL traffic	642	602
Total cars loaded	556,831	544,935

CUMULATIVE TOTAL, 43 weeks	1970	1969	1968
	22,658,047	23,365,643	23,435,680
Estimated revenue ton-miles (billions) 43 weeks	629.7	634.1	616.8

PIGGYBACK CARLOADINGS

U. S. piggyback loadings for the week ended Oct. 17 totaled 25,538 cars (8.5% below the corresponding week last year), and 41,088 trailers or containers (down 12.4% from 1969). Cumulative volume for the first 42 weeks of 1970 is 1,031,409 cars (5.2% below the 1969 total), and 1,702,310 trailers or containers (down 4.9% from 1969).

IN CANADA

7 days ending	Revenue Cars Loaded	Cumulative Totals
Oct. 7, 1970	82,221	2,955,288
Oct. 7, 1969	74,194	2,775,362

FREIGHT-TRAIN CARS

● *CP Rail.*—Ordered 200 100-ton container flat cars from Hawker Siddeley Canada at a cost of $4 million. The cars will be built at HSC's Trenton, N.S., plant. Delivery is scheduled for February, March and April next year. The cars will be able to carry four 20-ft containers, two 20-ft and one 40-ft container, or two 40-ft containers loaded at maximum weight.

● *Soo Line.*—Ordered 300 100-ton hi-cube covered hopper cars from Thrall Car at an approximate cost of $4.9 million. The cars will be acquired on a 15-year lease through the Equipment Leasing Division of the Itel Corp. of San Francisco. They will be equipped with interior lining to permit transport of various commodities. The cars will be used almost exclusively to haul grain, grain products and potash.

● *Trailer Train.*—Ordered 253 89-ft, 4-in. cars as follows: From the Amcar Division of ACF—44 low-level and 31 container cars; from Bethlehem Steel—85 standard-level cars; and from Pullman-Standard—93 low-level cars. This brings TTX orders for new cars since Jan. 1 to 3,349. On Oct. 20, TTX had 58,019 cars in service or on order.

● *Orders and deliveries.*—Orders were placed for 2,073 new freight cars in September, compared with 2,148 in the preceding month and 4,504 in September 1969. New cars on order and undelivered on Oct. 1 totaled 21,672, compared with 25,782 on Sept. 1 and 45,133 on Oct. 1, 1969.

FREIGHT TRAIN CARS DELIVERED AND ORDERED IN SEPTEMBER AND BACKLOG OF ORDERS

	Sept. 1970	Aug. 1970	Sept. 1969
DELIVERED			
Built new by carbuilders	4,922	4,127	4,879
Built new in R.R. shops	1,225	1,037	2,002
Built new—Total	6,147	5,164	6,881
Rebuilt	924	681	597
TOTAL DELIVERED	**7,071**	**5,845**	**7,478**
ORDERED			
To be built new by car builders	1,726	2,148	4,021
To be built new in R.R. shops	347	0	483
To be built new—Total	2,073	2,148	4,504
To be rebuilt	216	0	611
TOTAL ORDERED	**2,289**	**2,148**	**5,115**

	Oct. 1, 1970	Sept. 1, 1970	Oct. 1, 1969
ON ORDER AND UNDELIVERED			
To be built new by car builders	17,621	20,853	38,853
To be built new in R.R. shops	4,051	4,929	6,280
To be built new—Total	21,672	25,782	45,133
To be rebuilt	4,415	5,123	4,405
TOTAL ON ORDER	**26,087**	**30,905**	**49,538**

CAPITAL EXPENDITURES

● *Missouri Pacific.*—Ordered 500 roller-bearing-equipped freight cars and 25 3,000-hp diesel locomotives at a cost of more than $16 million. The Amcar Division of ACF will build the cars: 400 50½-ft, 70-ton box cars (at St. Louis), and 100 100-ton covered hopper cars (at Huntington, W. Va.). The box cars will be equipped with special cushioning devices. Electro-Motive will supply 20 SD40 diesels, and General Electric will build five U30C diesels.

PASSENGER-TRAIN CARS

● *New York/Connecticut.*—Ordered 144 commuter cars from General Electric at a cost of $59.4 million (RA, Sept. 14, p. 8). The cars will be put in service beginning in 1972 on Penn Central's New Haven division, whose commuter responsibilities are being taken over by the two states on Jan. 1. (Details on page 13.)

TRANSIT

● *BART.*—Westinghouse Air Brake Co. has received a contract worth nearly $1 million to supply a new type of automatic coupler and draft gear for 250 cars being built for Bay Area Rapid Transit by the Rohr Corp.

● *City of Los Angeles Department of Airports.*—Awarded a contract to Kaiser Engineers for design of the substructures for a tracked air-cushion vehicle (TACV) facility that will operate between Los Angeles International Airport and the San Fernando Valley. Kaiser Engineers recently completed route planning and related studies for the 16.3-mile system.

SHIPMENTS OF RAILROAD STEEL PRODUCTS

(AUGUST AND EIGHT MONTHS 1970)

	NET TONS			
	August	Per Cent Change*	Eight Months	Per Cent Change*
Rails, trackwork and equipment	65,400	+7.6	780,702	+2.5
Freight and passenger cars and locomotives	126,222	-21.9	1,411,024	-9.0
Street railways and rapid transit systems	5,009	-26.2	28,971	-17.8

*Per cent change compares 1970 periods with like 1969 periods.

Source: American Iron and Steel Institute.

NEW ORDERS FOR MACHINE TOOLS*

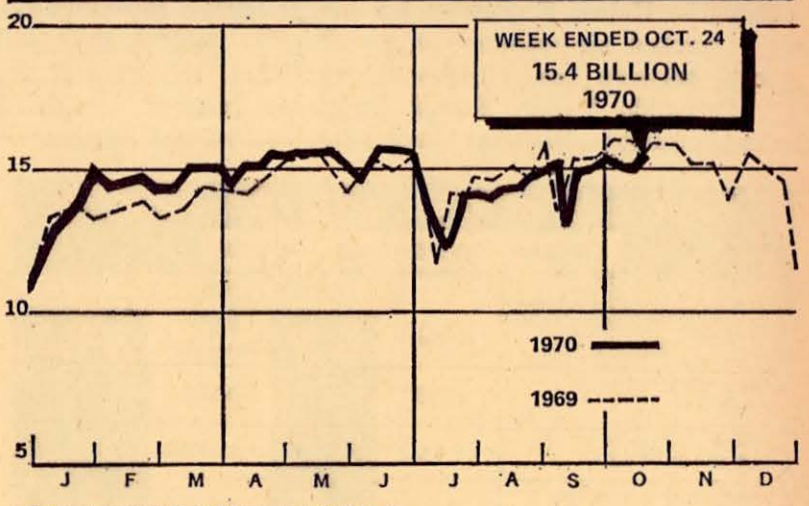
	September 1970 ($000)	September 1969 ($000)	9 mos. 1970 ($000)	9 mos. 1969 ($000)
Metal cutting tools	44,050	82,000	545,800	944,550
Metal forming tools	22,950	27,700	182,400	430,300

MACHINE TOOL SHIPMENTS*

	September 1970 ($000)	September 1969 ($000)	9 mos. 1970 ($000)	9 mos. 1969 ($000)
Metal cutting tools	82,800	108,400	780,000	877,500
Metal forming tools	30,600	34,850	343,050	289,100

*Including foreign and domestic.
Source: National Machine Tool Builders' Association.

RAIL FREIGHT TRAFFIC TRENDS
BILLION TON-MILES (Estimated)



Source: Association of American Railroads

Viewpoint

Work rules: Shouting won't do the job

By the time these comments go through the printer, the bindery, and the U.S. mail, an emergency board—hopefully—will have filed its report with President Nixon in the wage case involving the biggest of the operating unions and three of the non-ops, including the organizations that rank No. 1 and No. 2 in membership.

Along with a wage recommendation, there may be—again, hopefully—a statement by the board on work rules, a statement which can serve as a basis for getting the industry moving once again toward bringing its work procedures in tune with today's reality and tomorrow's need.

Railroad representatives have asked for a rules study by a commission which would have the power to make its findings binding. Predictably, labor representatives don't go along on the "binding" part—but indications are that a commission study, as such, is not opposed in outright-and-forever fashion.

In whatever way rules come under study, however, under study they must come—and into some atmosphere of change.

Certainly, the cost aspect of rules-change is important. But, important as that one element may be, in the long run it is no more vital—and some argue it is less so—than the revenue-producing and profit-making and job-securing opportunities change could bring.

This kind of thing, of course, is the goal of the Illinois Central/United Transportation Union JOBS Commission, about which so much has already been written. It's also something which A. Scheffer Lang recently put into context. Lang, DOT's first Railroad Administrator, and now head of the Transportation Systems Division in M.I.T.'s Department of Civil Engineering, points out that new rules are needed not so much because they will be cheaper but because they will permit railroads to provide better service at reasonable cost.

His reasoning, in part: The real goal of the industry in operating with smaller crews is not a reduction in cost-per-car moved but the ability to move cars in smaller trains. The goal in eliminating yardings of cars is not only a reduction in yard labor costs but the ability to switch and deliver cars more often. Changes of this kind, he declares, can help to produce the kind of service reliability the customer demands. Change in this area does not necessarily mean operating with fewer men—but "it does mean that men will be used in different ways."

Change does not come all that easily, to either rail labor or rail management. But the time may be ripe, and the men may be the right men, to move for change now—more so, certainly, than in 1959 when work rules entered the modern era of argument.

TIME TO PLAY IT COOL

This isn't the time for people on either side to be standing up and shouting at each other. More than ever, perhaps, it's a time for thoughtful people on both sides to realize that the industry may not go far, if there isn't change.

Somehow, there has to come a rapprochement between unions maintaining all the old work patterns and railroads getting knocked for lack of service dependability, reliability, quality. It's that, or get knocked out of tomorrow's opportunities.

D.C. Metro rebuts "unsafe" charge

Washington, D.C.'s Metro system, charged by the National Transportation Safety Board with constructing an unsafe and hazardous rapid transit system, has replied with the declaration that Metro will be the safest subway in the world.

Because Metro is on Federal land in the District of Columbia, it alone falls under NTSB supervision, unlike other big city transit systems.

Metro General Manager Jackson Graham criticized the NTSB safety investigation as "casual" and said the same charges could be made against any of the other rapid rail systems in the country.

He added that the NTSB report "obscures from public attention . . . that rapid rail transit per se, because of its grade-separated right of way, is by far the safest of all modes of modern transportation."

Graham said he regretted that there was a "total lack of consultation" between Metro and the Safety Board which might have resulted in a "most useful document." However, he said that because the NTSB report indicts not merely Metro but the entire rapid rail industry he had asked the American Transit Association and the Institute for Rapid Transit to convene a joint session to discuss the safety report in detail.

It should be noted that the NISB report has no binding power.

"Hazards" listed

The report said the 98-mile Metro had these inherent "hazards":

—The placement of Metro tracks next to railroad tracks makes disaster a "foreseeable possibility" in the event of derailments, loose boxcar doors, or shifted loads by freight trains.

—The proposed chainlink fence would prevent trackmen from flagging down trains, either Metro or railroad, if the track becomes obstructed.

In a statement rebutting the NTSB report, Metro's consulting engineers, De Leuw, Cather & Co., made these comments:

—There is a minimum distance of 20 feet between Metro and conventional railroad tracks, which is seven to five feet wider than general practice elsewhere in the country. The firm said the chainlink fence is "an absolute safety requirement" protecting the public from exposure to the direct current traction power contact rail.

Other safety defect charges and rebuttals were:

—Metro trains moving in tunnels in opposite directions have no barrier between them, and collision is almost inevitable in case of derailment.

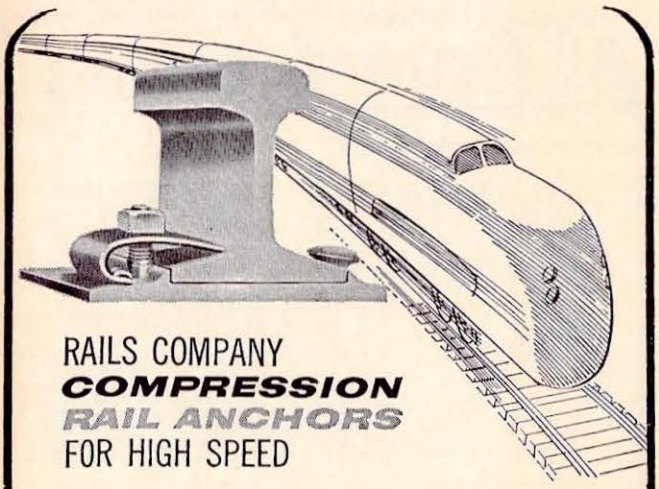
Metro said the danger of collision was no greater in tunnels than on the surface, and that there were no barriers elsewhere in the country.

—There are no barriers to prevent people from falling or jumping into the path of a train in stations.

Metro said each station would be equipped with warning lights to alert commuters to approaching trains.

—There are no plans for emergency exits from tunnels.

Metro said emergency exits were indeed planned. ■



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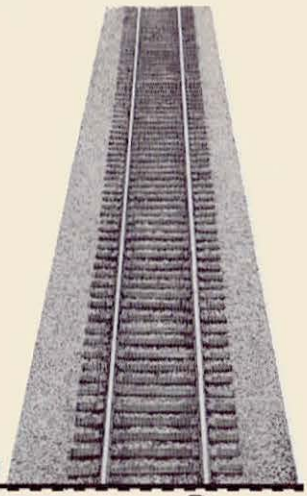

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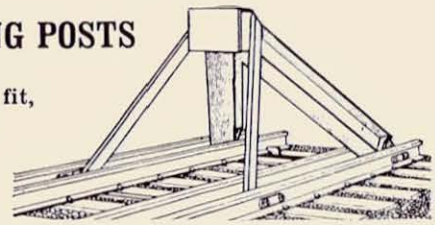

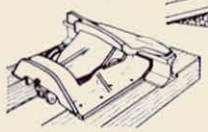

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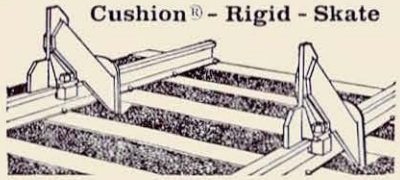

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VIEW FROM THE STREET

Credit is still dear

Over the past month, the market for rail equities continued to stage a sharp upturn, reaching the highest levels since early March. However, the recovery in the bond market has been notably less robust—reflecting both lingering doubt as to the credit-worthiness of railroads (or transportation companies in general, with the dismal showing of the airlines in the third quarter not helping one bit), and the continuing record amount of corporate debt offered for sale. The near certainty that the Federal budget will show a huge deficit, perhaps exceeding $10 billion, has served to further upset lenders. The implications of a budget deficit remain highly inflationary.

As far as the rails are concerned, the short-term fundamentals continue to improve slowly as the industry recovers from one of the worst periods in recent memory. Most third-quarter earnings statements were moderately encouraging; a few roads reported either severe declines or major gains. Overall, Class I figures still lagged behind the 1969 third quarter, though by a small margin. Ordinary income for the first nine months of 1970 stands about $130 million below the 1969 mark, largely due to Penn Central's poor results. The "average" railroad is probably just about even, up or down by 5% or so. Full year earnings for Class I roads will essentially be determined by the duration of the General Motors strike; as of this writing the outlook is not bright. However, most other types of commodities are moving at a healthy pace; at the least, the first quarter of 1971 should show a significant rebound in earnings as GM traffic catches up.

Congress takes a hand . . .

In Congress, several bills have passed which affect the industry. But most investors do not seem to grapple with the implications of the Safety Act, already signed into law. It may prove extremely expensive in the short run, even for well-maintained roads, although its long-run benefits are substantial. Nor is the pernicious impact of the hours-of-work bill generally appreciated. On the surface, at least, most observers hope that rescheduling of assignments, with a reduction in accidents due to fatigue, together with greater physical efficiency, will offset the obvious money costs. Skepticism is warranted on this point.

The Railpax plan was passed by overwhelming majorities and sent to the White House; now signed into law, when subsequently funded it may lift much of the financial burden of providing long-haul passenger service. Any money savings, however, would depend on funding levels. At best this might be $50 million or less in calender 1971 and perhaps $80 million per annum thereafter, rather than the $200 million or so "out-of-pocket" loss or the $400 million of "fully-allocated" loss cited religiously in press releases. Investor reaction to this bill has been unwarranted by euphoric, and some real disappointments will surely occur.

The property tax-equalization bill may yet be passed prior to the end of this session, and while the immediate impact would be small it would help hold down a fixed charge which has declined steadily as percentage of gross over the past decade, although remaining about constant in dollar terms.

All in all, the foreseeable news items on the legislative front are not unfavorable, even conceding that the Federal loan guarantee and freight-car pool bills won't be salvaged. The news on the labor front is considerably less pleasant; however, most of the financial community seems to be resigned to a major increase in both 1970 and 1971 wage levels, accompanied by at least some type of strike or strike threat. Were it not that the truckers and bargelines have even more severe labor-cost problems of their own, the railroad industry would be in worse shape. As it is, rate increases should be large enough to stay even.

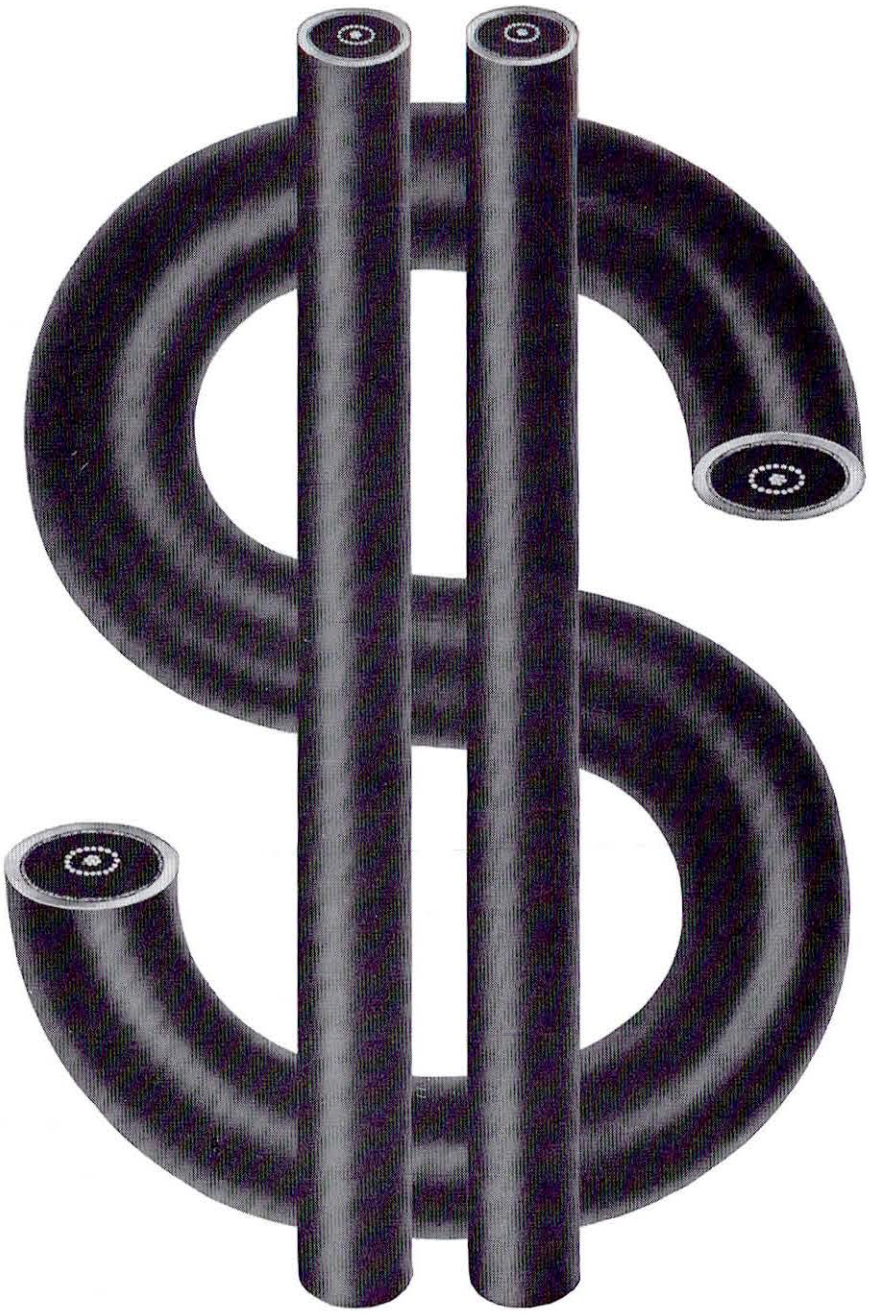
Taking a longer view, the current problems of the industry are not unmanageable. In fact, there is some statistical evidence that the long decline in the fortunes of the rails (which began when nationalization occurred in 1918) has indeed been halted. Four or five items can be cited.

The most obvious is the rail penetration of the intercity freight market. It declined steadily from the 1916-20 period when it was about 85% (accurate statistics are extremely difficult to develop) to a trifle over 43% in 1961. Since then the decline has been minimal, only about 1½ percentage points, almost all of which occurred between 1966 and 1967. A second item, not so generally used, is rail industry revenue as a percentage of the GNP. After 1916 (except for the war years) it fell steadily until 1969. The current year appears to reverse that long-standing trend; rail gross should grow about 7%, about the same as the GNP. This tends to confirm the evidence provided by ton-mile distribution statistics.

On the financial side, one can point to another interesting relationship. Class I net in 1955, the best year of that decade, was $921 million. By 1966, the best year of the 60s, it had fallen to $902 million. Dividing by a factor equal to the inflation which occurred during the period—120.0—it is clear that the industry's position declined. However, between 1961 and 1969, one trough to another, ordinary income rose from $382 million to $511 million. After dividing by a similar "price-level deflator" of 130.0, the industry's earnings held roughly level. Hopefully, this stable relationship will endure and perhaps turn positive over the next decade.

As a clincher, it's worth noting that in 1961 every road had a terrible year or had had one in 1960. But, in 1969, seven Class I roads had all-time earnings records (not adjusted for inflation, however). The group included small roads and large, with wide geographical distribution. This doesn't mean that the industry as a whole has made it out of the woods yet, particularly in view of Penn Central, but it does say that a significant number have pulled themselves up in a very difficult period.

How did they do it? Basically by adopting one or several concepts which give a railroad leverage enough to offset the inherent disadvantages of unfair regulation and restrictive work rules. These concepts include proper cost finding, in order to price service at profitable levels; emphasizing reliable, not necessarily fast, service; restricting investment to remunerative investments; careful training and adequate compensation for junior and middle management; and aggressive industrial development programs keyed to production of profitable traffic.



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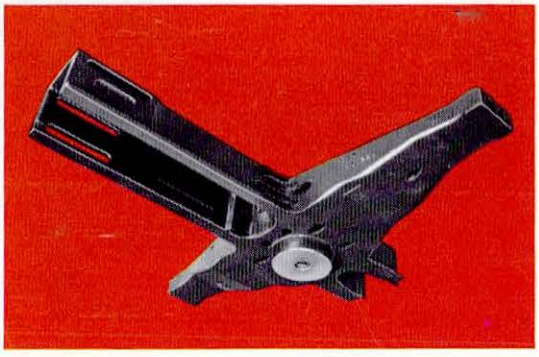

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